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Plus New iMacs, G4s,
and Mac OS X 10.1

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Nintendo Games on Your Mac!*

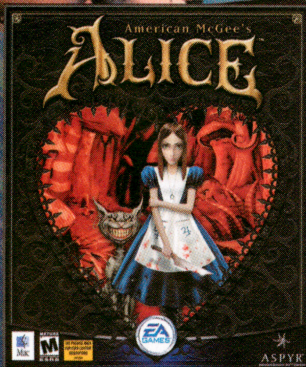
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The Mac Workshop, You Ask, We Answer

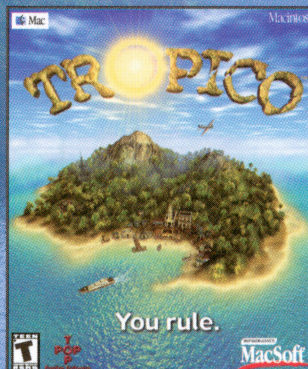
October 2001

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The Best Games Are Built for M



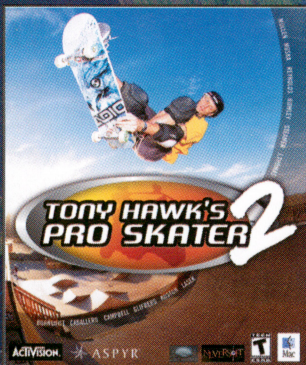
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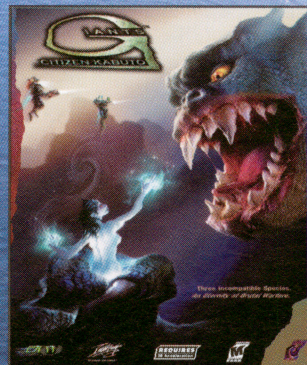
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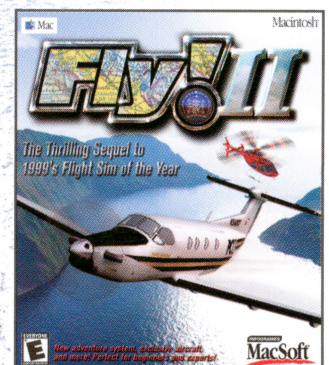
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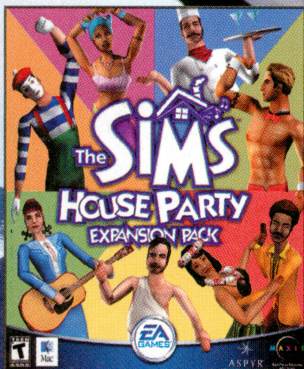


www.macplay.com

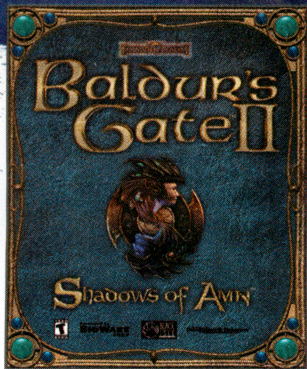


www.wizworks.com

Mac OS X



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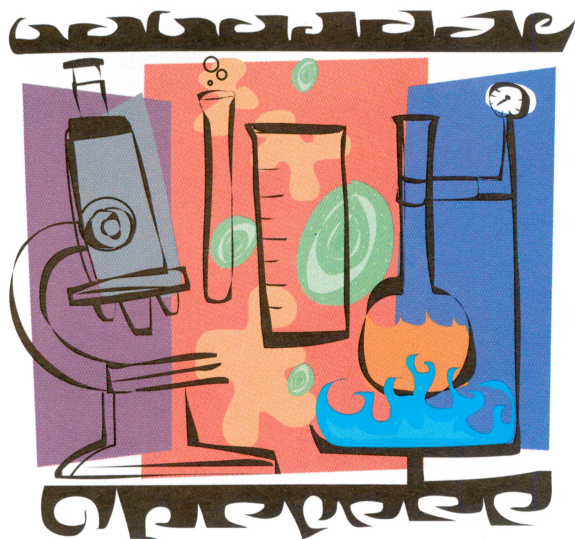
Shipping in September

Visit
www.apple.com/games



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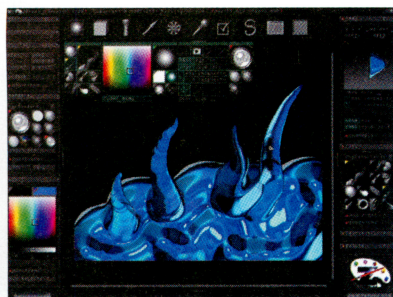
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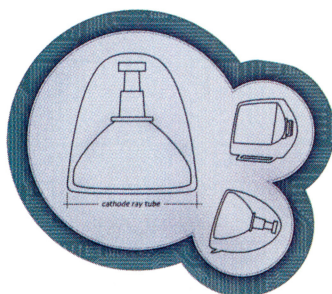
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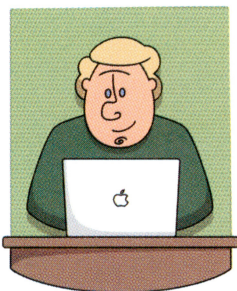
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- ★★★★★ Print Explosion Deluxe
- ★★★★★ Sensiva Classic
- ★★★★★ MYOB AccountEdge
- ★★★★★ Amorphium Pro 1.1
- ★★★★★ Snapz Pro X
- ★★★★★ Toon Boon Studio
- ★★★ Stuffed Express 1.1
- ★★★ ZBrush 1.23

Home Office: Hardware

- ★★★★★ 30GB PocketDrive
- ★★★★★ FriendlyNet
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- ★★★★★ Graphire2
- ★★★ VeloCD

Entertainment

- ★★★★★ The Sims: House Party
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Your Family

- ★★★★★ Alphabet
- ★★★★★ Math Blaster Cross Terrain Challenge
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Rating System

- ★★★★★ **Mac-nificent.** You gotta get it. No flaws.
- ★★★★ **Excellent.** Recommended even if it has a minor flaw or two.
- ★★★ **Average.** Despite problems still a worthwhile product.
- ★★ **Below Average.** Has serious flaws that limit its usefulness or fun.
- ★ **Poor.** Avoid this product at all costs.

Back to Work, Back to School

For most of us here, Labor Day weekend marks the unofficial end of summer. The kids are back in school, our vacations are a distant memory, and our thoughts turn toward getting back into the swing of things.

In fact, this issue begins our final quarter of 2001, and I'd like to take this opportunity bring you up to date on *MacHome* happenings.

Many of you have noted and commented on the fact that *MacHome* has been thin for the past few months. While we like to think of it as getting down to bikini-weight; one of our readers went so far as to wonder if there was a paper

shortage he wasn't aware of. No paper shortage, simply an advertising shortage. Like most technology magazines, we've experienced a significant drop-off in advertising revenue this year and have

had to make a number of tough decisions in order to continue to deliver the content you've come to expect. One of those decisions was to reduce the total magazine pages with as little adverse effect on editorial quality and mix as possible.

The good news is that you, our subscribers and newsstand buyers, have been loyal customers this year, but your support only pays for the printing, production, and delivery of the magazine. Magazines rely heavily on ad revenue to pay for content, staff, overhead, and the general cost of doing business.

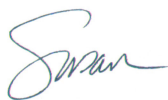
What can you do to help us compensate for the drop in ad pages? Renew

immediately, even if you have a few issues left on your current subscription. If you're a newsstand buyer, subscribe today. Subscribe or renew at www.machome.com/subscribe, or toll-free at 800-800-6542. And don't forget to recommend us to friends and family!

You'll see the page count begin to build over the coming months as companies start to launch fall and holiday advertising campaigns. Meanwhile, we'll focus our content on the topics you've told us hold your interest: tips and tricks, projects, workshops, focused product reviews, productivity applications, Mac OS X, family, and entertainment. As always, your feedback is welcome: susan@machome.com comes straight to my inbox.

Meanwhile, Apple continues to post profits, launch innovative new products (see page 12), and open new retail stores in spite of the slump in the technology market. This month we review and rate 21 products for home, business, and family; Macworld Expo coverage begins on page 18; and our special iMac Buyer's Guide (affectionately known as our guide for new owners) begins on page 34. Enjoy, and let us know what you think: letters@machome.com

Best regards,



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Sticky Moves

I can only use one finger of one hand to operate the trackball for my Power Mac G3. I created a "sticky key" with Kensington's MouseWorks so I can drag and drop. Now I want to get an iBook for when I travel, but its touchpad has just one button. (Besides, MouseWorks is only available on a floppy, which is unusable on an iBook.) Does anyone have a solution?

Kent M. Sprague

MouseWorks comes on CD with Kensington mice — you could use an external USB mouse or trackball in the same manner that you do with your G3. Also look at "Open Access" in MacHome August 2001. MouseKeys should be able to help you out.

Mac Product Mecca

WOW!!! The Mac, the whole Mac, and nothing but the Mac. I recently visited the Apple Store, in Tyson Corner, Virginia. What a refreshing experience, to be able to walk into a computer store and find it full of the best computers in the world, software, hardware, and knowledgeable people.

The store was well lit and laid out, with many computers and iBook set up and running, to test drive. I wanted to purchase some software, and even though I was in an Apple Store, I did not see on the label that said it would operate on my iMac, so I asked if it would work. (I guess old habits die hard.) The salesman promptly opened the package, popped it into an operating Mac, and it worked!

The experience was enjoyable, the salesman very helpful, and I would travel the 2 1/2 hours to visit again. Now all I have to do is convince Apple to open a store in my area.

James Hiester

Talk to James

When I first bought my Mac 5 months ago, I was so proud and

excited. But now I wish that Apple had a competitor for me to support! I bought a G4 model a month before they came out with the latest G4 model and have since discovered that they do not sell accessories, such as speakers, for my model. And there are no stores to go buy any Apple product other than an entire computer.

Susan in Atlanta

We're not sure why you can't find speakers or other products for your G4. CompUSA or a local Mac store will sell extra options. Also look online to Apple or mail-order vendors for another way to find great Mac products.

We Read Your Tea Leaves

I purchased MacHome back in February so I could get help with OS X when it came out. Your magazine has helped me in so many areas (even besides OS X) that I cannot thank you enough.

I had a friend give me a digital camera about a month ago. The camera has worked better than I ever dreamed, and now my wife is ready for a digital video camera. She wanted to know if we could put the video onto a CD that could be used in a DVD player. Your July magazine showed up the next day, and what a big smile you brought to my face. On the cover was the title "Create a Video CD." I quickly read the article and proudly announced that making a Video CD would be no problem at all. Thanks for the article.

Jim Cox

Easing into the Deep End

Yes, I have installed Mac OS X. I'm enjoying this operating system, but it's like starting over. I can't access some of my older programs because they function exclusively in Mac OS 9.1, but I'm patient that there will be an update someday.



Content but waiting,

John

The Eyes Have It

The reviewer noted no "thumbs down" for Photoshop Elements. However, the program advertises that it can fix red-eye. It cannot however, change the red eye to black or anything approaching black. I have chatted with the company. No dark eyes here. So, if you need to change red eye using their red eye tool, make sure it is on a blue-eyed person. This is very frustrating and it was very disconcerting to have spent the bucks to eliminate red-eye, and then find it can't be done with their red-eye tool.

Joel Perlsh

The red-eye tool darkens the red area, but it isn't designed to add other colors. Red-eye typically affects the black pupil most because the flash is reflected back to the lens. Surrounding areas are less changed, but you'll have best results using the tool on a group picture instead of a portrait.

write to us...

Please write us with your comments! All letters are assumed intended for publication and may be edited. You can reach us by snail mail at: 703 Market Street, Suite 535, San Francisco, CA 94103, or by email:

letters@machome.com

"Tropico takes the addictive building gameplay style of Railroad Tycoon II and adds an ample drop of banana republic intrigue to create a truly absorbing game."

—Apple.com

"A refreshing twist on the old building theme."

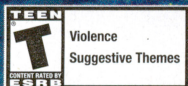
—Computer Gaming World

You rule.

TROPICO™



You are the newly-installed dictator of an obscure Caribbean Island. You must create a life of prosperity and happiness for your people. Success will bring the praise of your people, along with a fat Swiss bank account. Failure? Well, there's always martial law.



MacSoft®

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Canon Two-in-One

Is it a camera? Or a camcorder? If it's Canon's new Optura100 MC you're talking about, the answer is "Both." It uses a 1.3 megapixel CCD to capture digital video and digital photos at 1,280 X 960 resolution, better than the usual 640 X 480 digital photo resolution found in other digital camcorders.

A 10x optical zoom lens plus 200x digital zoom eliminates the shakes in both video and photo mode through optical image stabilization. Optional lenses are available. Also new is a built-in auto flash for brightening subjects for digital photos, and an extended recording mode that delivers four hours of video recording or over 700 photos on one 80-minute MiniDV videotape.

The kit includes an 8MB MultiMedia Card for image storage. The supplied card contains pre-programmed graphics that can be combined with live images from the camera to create superimposed backgrounds or cartoon foregrounds.

Interface connections on the camcorder include FireWire, audio and video in/out, and analog in. This makes it easy to add audio or digital video from another source, as well as digitize old footage through the camcorder rather than a computer-converter set-up.

In addition to a fresh look, the Optura100 MC has three new design elements. A rotary grip belt makes single-hand shooting comfortable. Rabalon, a synthetic rubber, accents the camcorder and gives it a secure grip. Finally, the photo button and zoom control now sit side by side, right where your index finger wants them.

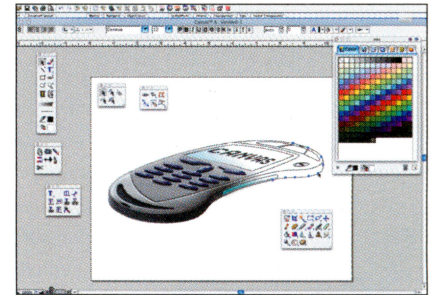
The Optura100 MC is now available for \$1,899.

Canon, www.canondv.com,
800-652-2666



OS X Canvas

Deneba is set to release Canvas 8 for Mac OS X. The popular high-end



graphics application boasts over 100 new features, including the ability to script commands for automation, added font tools, fresh image effects, and peer-to-peer filesharing. The full program costs \$350; an upgrade from Canvas 7 is expected to run around \$200.

Deneba Software, www.deneba.com,
800-733-6322

Hold Up!

There's a new personal finance manager waiting for your money. Hold Up!, available in Mac OS 8.5 or later or Mac OS X flavors, not only handles the usual transactions, accounts, and payments, it also makes money management efficient with features like multiple transaction editing from a single window and transaction filters that only pull up the transfers you need to see. A set of skins customizes the interface to match your desktop. A 1MB demo is available. The Basic version of Hold-Up is \$20; the Pro version, which tracks multiple accounts, is \$30.

Hold-Up, www.hold-up.fr.st

"The most heart-stopping strategy game ever."

-Time Magazine

AGE OF EMPIRES II
THE AGE OF KINGS

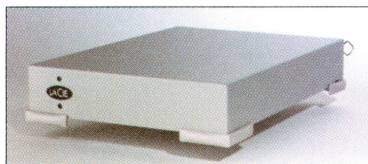
ENSEMBLE STUDIOS
Microsoft
Bold

Coming in October for Macintosh from

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LaCie Breaks Speed Barrier

FireWire drives keep getting bigger and faster — LaCie is now shipping drives with a new FireWire controller that provides double the data throughput performance of previous FireWire drives. The 7,200 rpm drives stream data to the computer at a sustained transfer rate of 35MB/s and provide burst performance to 50MB/s, making it ideal for storing, exchanging, and working on large files such as graphics, audio, and digital videos. Depending upon capacity, the compact 3.5" drives can store more than five hours of DV video, more than 100 images, and more than a mile-high stack of text documents.



The FireWire hard drives include the LaCie 1394 cable, an internal international power supply for worldwide use, and LaCie's Silverlining Pro drive utility software for MacOS environments. Silverlining is a drive management application that can manage USB, IDE, SCSI, and FireWire peripherals at the same time.

Suggested retail prices reflect storage capacity: 20GB (\$229), 40GB (\$279), 60GB (\$329), and 75GB (\$429). The 40GB and 60GB drives are available from the Apple Store.

LaCie, www.lacie.com, 503-844-4502

Become a Spy Master

Knowledge Adventure is leading kids ages 7 - 11 down a new career path this fall with the release of two CD-ROM titles — Unmask the Prankster! and Max Strikes Back! Players create secret identities and use state-of-the-art spy gadgets to solve mind-bending missions in a quest to save the world.

A former Spy Master gone bad is causing out-of-control weirdness at every turn in a 3D environment. Mind-numbing elevator music is broadcast throughout the city. Food is turning green and robots are running wild. Players join the secret Spy Masters team in a race to nab the Prankster. Along the way, kids earn gadgets like the CyberVisor (which spots invisible goodies) that can be used in both Spy Masters games as well as in the online multiplayer game.

One of the coolest new features is the team-based online strategy game, similar to capture the flag, where kids can master the use of their gadgets, trade spy powers or gear, and chat with other spies.

The games feature content spanning the 3rd, 4th, and 5th grades. Math, language arts, history, geography, science, and logic will be essential to stopping the Prankster.

Unmask the Prankster! and Max Strikes Back! each sell for \$30.

Knowledge Adventure, www.KnowledgeAdventure.com, 800-545-7677

Rescue Heroes + Power Wheels = Mad Fun

Licensed drivers, look out! Power Wheels and Rescue Heroes are driving over to the Mac. Knowledge Adventure is introducing two new titles for kids ages 4-7 in time for Christmas.

Power Wheels: Offroad Adventure (\$20) changes every time kids play as they experiment with tons of ramps, obstacles, and debris. Each choice a child makes causes a variety of outcomes, and funny animated props add to the thrill; for example, if players drive over the whirlwind, the car is lifted off the track and spins madly.

Once their course is designed, players drive over each of the props to earn points towards getting their own personalized driver's license. A two-player mode lets family members race together on one of the pre-made practice tracks or on their own design.

Rescue Heroes: Meteor Madness (\$20) sends kids to four trouble spots around the world — Outback Nature Preserve, Alpine Slopes, Seaside Studios, and Klondike Canyons — as a storm of blazing meteorites

unleashes disasters of every kind. Three levels of difficulty extend the heroics.

Knowledge Adventure, www.KnowledgeAdventure.com,

iBook in Leather

JR Hill & Co. is now shipping full-grain leather iBook Screen Protectors (\$13). Place over the keyboard to protect the screen when closed from all that gritty junk between the keys. (Your sandwich crumbs had to go somewhere, right?) The protectors, available in colors like burgundy and blue, can be embossed with custom logos. The company also makes protectors for the TiBook.

JR Hill & Company,
www.jrhillandcompany.com,
800-258-3654

Sonnet Sings in Harmoni, Adds Piccolo

At the Macworld Expo, Sonnet Technologies unveiled hardware that will cement its position as everyone's favorite Mac upgrade company.

First there's Piccolo, a line of flash drives about the size of a car key. Piccolo connects flash RAM to any USB port, providing convenient plug-and-play storage. Piccolo is available in sizes from 32MB to 256MB and can be used like any removable media. It is cross-platform compatible with any computer that has a standard USB connection, including most Macs and Windows PCs.



The computer sees Piccolo as a drive once it's plugged into any USB port. It mounts on the desktop with no drivers needed, and can be written to or read from like any other volume. The Piccolo draws needed power from its host computer and requires no cables, discs, readers, adapters, or batteries. Piccolo comes in four capacities of 32MB (\$100), 64MB (\$190), 128MB (\$350), and 256MB (\$600). The first three capacities shipped in August; the 256MB version will arrive later this year.

Next is Harmoni (\$300), an upgrade card for the original iMac that adds a 500MHz G3 processor and a FireWire port. Compatible iMac models are iMac 233 MHz, 266 MHz, 333 MHz (Rev A-D). The combo card operates with the iMac's existing hardware, software, RAM and peripherals. It also supports everything from Mac OS 8.1 through the latest version of OS X. So now owners of the earliest iMac can not only enjoy digital video through FireWire, they can do it on a computer running twice as fast. The Harmoni should be ready by the end of this year.

Sonnet Technologies,

www.sonnettech.com, 949-587-3500

MacPlay Plans

The re-creation of game publishing giant, MacPlay, continues as the company has announced several titles and recently released Baldur's Gate II.

Alien Versus Predator should be released already, as MacPlay has quickly published the Mac version of a PC favorite. The characters from the Alien and Predator movies face off in this dark and spooky title. Each has special abilities that give the game a unique perspective. Crawl up the wall as an alien or become invisible like the predator. Or you can do battle as a lowly human.

MacPlay has also announced three other games, all of which it hopes to publish soon after this issue is released. Zork: Grand Inquisitor is a modern update to one of the original adventures, and Heretic II and Hexen II are classic first-person shooters.

MacPlay, www.macplay.com

Wordsmiths Can Play that X

X-Words Deluxe 2.0 has shipped from Freeverse Software to satisfy Mac OS X crossword fans. Similar to Scrabble, X-Words Deluxe is a turn-based word-creation game for one to four players. Finally, you can customize X-Words Deluxe with your own word lists. Freeverse Software, www.freeverse.com

Control Your Fonts

Extensis has unleashed Suitcase 10 (\$100), an upgrade to its font management software. Improvements include faster previewing, auto-activation of font sets customized to specific applications, and corrupt font tracking — never again will you wonder which font caused the snafu! A free upgrade to the Mac OS X version of Suitcase 10 will be available later this year.

Extensis, www.extensis.com,

800-796-9798

“Strategy Game of the Year.”
-Gamespot

AGE OF EMPIRES II THE AGE OF KINGS
ENSEMBLE STUDIOS
Microsoft

Coming in October for Macintosh from **BOLD**

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Web Crossing's latest online toolkit goes to school.

Campus Crossing courses contain personal study folders with classroom areas for course material and related discussion, and private homework submission and chat capabilities, all with email notification of new activity.

Teachers can manage enrollment, develop course material and give exams, and also lead live classroom events using content like slides, web pages, and streaming video alongside a chat interface for dialog.

Campus Crossing also provides full email infrastructure and serves web pages with calendaring, polls, surveys and exams. Both private and public group features provide a campus with discussion capabilities for administration and faculty meetings, student activities and communication with the public. New students can be set up with no client downloads or separate software installation necessary. Pricing depends on the number of students and teachers using the software, but ranges from \$395 and higher.

"I teach an interdepartmental class with over 500 students in it," said Americ Azevedo, lecturer at UC Berkeley. "I was about ready to give up on using web-based conferencing for online dialog and discussion until I ran into Web Crossing. It gave me everything I dreamed of, and more, by providing the flexibility to design the discussion space for my students on the fly."

Web Crossing, 916-771-7099, www.webcrossing.com



ViewSonic Shows Off Bigger, Slimmer LCD

ViewSonic introduced the VE170m,

a 17-inch LCD monitor with a suggested retail price of \$899. Its two-inch profile still manages to include built-in speakers. With a high contrast ratio of 300:1 and

1,280x1,024 true resolution, the new VE170m produces sharp, crisp text and vivid colors. The VE170m is now available.

ViewSonic, www.ViewSonic.com, 800-888-8583



Freeverse Expands

Freeverse Software has come up with another original title that should be out soon after this issue. Wingnuts is a top-down scrolling arcade game in which you fly a plane against the forces of the evil Barron Von Schtopwatch.

The Barron has invented a time machine, and with it, he's traveled into the past to steal planes. You must down the vintage planes near his Bermuda Triangle base and stop him from reaching the powerful planes of the future. You'll be outfitted with dozens of weapons to strike at air and ground targets, and enemy planes will swarm from all directions.

Wingnuts supports Mac OS 8.6 through OS X, and will work with most joysticks.

Burning Monkey Solitaire II is out for Mac OS X (and you can play back to Mac OS 8.6). The classic solitaire card game includes games of Klondike, FreeCell, Pyramid, and 52 Pick-Up among other favorites. The monkeys are back with great sounds, bold graphics, and bad jokes.

Freeverse Software, www.freeverse.com

"May be the best real-time strategy game ever."

—Computer Games Online

AGE OF EMPIRES II THE AGE OF KINGS

Coming in October for Macintosh from **BOLD**

ENSEMBLE STUDIOS
Microsoft

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Apple Hardware Update

Apple announced updates to its desktop machines at the July Macworld Expo. While the portables remain the same, the iMac and G4 families have been tuned for better performance.

The iMacs get faster with G3 chips at speeds of 500MHz, 600MHz, or 700MHz. Hard drives of up to 60GB give room for music and video files. And all come with a CD-RW drive to master your own discs. The included RAM has also been bumped up to 128MB or 256MB for higher-end models.

Gamers and graphics gurus will note that the iMacs include the video-

out option to mirror on a big display. The updated machines' video is driven by an ATI Rage 128 Ultra with 16MB of video memory; this chip means that graphics are snappy whether in a web browser or most games.

Colors for these machines are nothing new although the fashions are solid hues; there were no surprise

Buttered Popcorn or Plaid Dream patterns. Choose Indigo, Snow, or Graphite, depending on the configuration.

The desktop G4s were also updated; Apple kept the top features while boosting the specs of all the machines.

Processor speeds are up; last month's top-of-the-line 733MHz G4 is now the entry machine. The other choices are an 867MHz processor or a set of two 800MHz chips. Drive space ranges between 40GB and 80GB, and the included RAM is either 128MB or 256MB.

A big Level 3 cache gives the top two G4s extra horsepower. The cache acts as a buffer for the processor to run calculations; it moves information to the processor faster than the hard drive shuffles data.

The case of the refined G4 differs from the previous Graphite offering. While it still retains the same shape and accessible side-door to get inside, this PowerMac now sports a shinier silver finish. It even looks fast.

Video specs are solid on the G4. Two machines include an Nvidia GeForce2 MX card that handles general screen tasks, video work, and games competently. The top model includes the same card with added TwinView functionality to let it drive two monitors at once.

The powerful SuperDrive is still a compelling reason to consider a G4. This drive burns CD-Rs, CD-RWs, and even DVDs to play in your DVD player. The top two options include the SuperDrive and Apple's iDVD for creating home movie discs. **MH**



iMacs

G3 Processor	Included RAM	Drive Size	Media Bay	Color	Price
500MHz	128MB	20GB	CD-RW	Indigo, Snow	\$999
600MHz	256MB	40GB	CD-RW	Snow, Graphite	\$1,299
700MHz	265MB	60GB	CD-RW	Snow, Graphite	\$1,499

Desktop G4s

G4 Processor	Included RAM	Drive Size	Media Bay	Level 3 Cache	Video Card	Price
733MHz	128MB	40GB	CD-RW	None	32MB GeForce2 MX	\$1,699
867MHz	128MB	60GB	SuperDrive	2MB	32MB GeForce2 MX	\$2,499
Dual 800MHz	265MB	80GB	SuperDrive	2MB per processor	64MB GeForce2 MX TwinView	\$3,499

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Weird Science



Light sensors, motion detectors, and mini-microscopes — science has never been more fun, or more portable.

By Sandy Brundage and
Joe "ScienceMan" Martha

We all slogged through science labs in school that were as exciting as scraping rubber eraser crumbs into piles, only to scatter them again, pile them up, scatter... you get the idea. But with laptops like Apple's iBook 2001 and some of the latest educational toys like data collectors, handheld microscopes, and Lego robots, science is not only fun, it's fascinating. And that's true whether you're still in school or long past graduation.

Data, Data, Who's Got the Data?

Data collectors are the opposite of garbage collectors. Rather than taking junk away, data collectors gather information in combination with a computer and various probes that take measurements on everything from relative humidity to force. The tools are also small and light, making it easy to take the experiment on the road. Once the numbers are in, the included software makes it simple to manipulate or analyze measurements to figure out trends. Two of the most popular collectors are Vernier's Lab Pro and Pasco's PasPort Xplorer.

Vernier

Vernier's Lab Pro 9 (www.vernier.com) takes temperatures, measures acidity, and calculates the speed of sound without breaking a sweat. About twice the size of a calculator and just as light, this sci-fi device is your key to turning the lens of science on the world around you. Want to experiment outdoors? The Lab Pro can collect data away from computers and regurgitate later for analysis. Even the design is futuristic cool. Six ports on the translucent forest green device are ready to connect to a variety of probes and sensors. The Middle School Kit (\$461) included a voltage probe, a light sensor, pH probe, two temperature probes, and motion detector.

When you're ready to study the data, the Lab Pro connects through USB to the Mac. It does require an external power source, either 4 AA batteries or an AC outlet (adapter included). It even has a fold-down flap to stand the unit on the desk, minimizing the amount of space it takes up.

Logger Pro software is included for data



analysis. It runs natively on Mac OS 7 through 9.1, and is just as happy in OS X's Classic environment. The interface is straightforward. You won't need a PhD in rocket science to get used to the program. Three windows — the Graph window, Table window, and Text window are customizable so you see as much or as little information as you want. Its experiment files are a great example of how Vernier has made experimentation a simple science. Logger Pro comes loaded with pre-set settings for a ton of experiments. For example, the Biology with Computers folder contains "Energy in Food" and "Acid Rain" experiments. Other categories include Physics with Computers ("Bungee Jump Acceleration") and Chemistry with Computers ("Household Acids"). Lost already? There are tutorials to get you rolling and recording.

Pasco

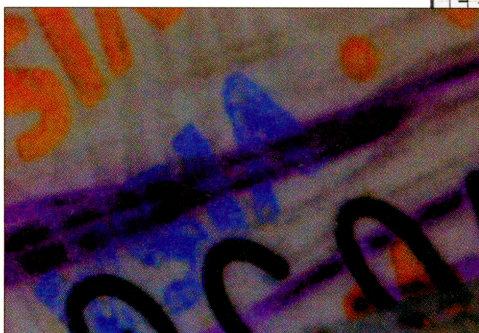
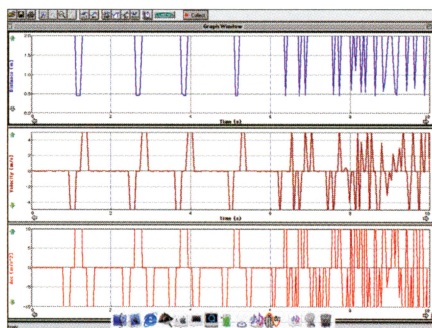
Pasco Scientific (www.pasco.com) has released a very exciting USB science product called the PasPort Xplorer datalogger. Priced at only \$149, the Xplorer offers complete mobility — simply plug in a sensor and start measuring. At last count, there were 13 in Pasco's fast growing list of Xplorer compatible sensors. Since there is no configuration necessary, the Xplorer is ridiculously easy to use. Plug in a sensor, and the Xplorer auto-detects it, so collecting data is just a single button-push away. If you make a mistake, the Xplorer is sophisticated enough to allow you to delete data sets, rearrange them, and even switch sensors — all your data sets will be stored.

If you just wish to view your data sets on the Xplorer's built-in screen, that's fine, but the real fun starts when you connect the Xplorer into your iBook! When you plug into a USB port, Pasco's DataStudio software recognizes the Xplorer and asks you if you would like to retrieve your data sets.

Now you can manipulate and analyze your data with the powerful DataStudio (\$99 single user) software. If you wish, you can now leave your Xplorer plugged into your iBook to collect real-time data with any sensor

you wish, or unplug it and go back outside to collect more data remotely!

Pasco also does a great job of targeting middle school, with some very cool simplified software packages and hardware bundles. On the software front, Pasco has developed "EZscreens" which are tailored to younger students and display data in a fun and simplified interface.



The heart rate EZscreen even has an animated heart that beats along with yours as it collects your heart rate data! EZscreens come included with Pasco's inventive bundles for middle school, such as the "Noodling with Newton" bundle that packages force and motion sensors with a USB link. See the website for all the other slick bundles, such as "Wondering About Waves" and "Measuring Matters."

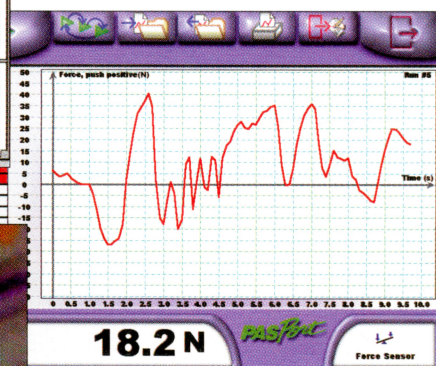
Teachers will also be very interested in the accessory bundles that allow you to perform all the experiments in Pasco's impressive teacher resource kit, which is group of 21 investigations that include pre-configured DataStudio investigations on a CD-ROM.

The Scope of Science

At the Macworld Expo in New York, a mob gathered at a table to ogle a man who was pointing a slim white device at

his head. Do-it-yourself brain surgery? No. He was demonstrating The Scope, a handheld microscope connected to his Mac by a USB cable and feeding larger-than-life images of his scalp straight to the computer. (He looked like a redhead at a distance, but under the scope, strands of silver, black, red, and even blond stood out.)

Available from Bodelin (www.bodelin.com) for \$200, The Scope is a marvel. Police departments are ordering it for their crime scene



Investigate the world around you with portable microscopes and motion detectors.

technicians, and teachers can't wait to get it into the classroom. It does double-duty as a webcam. The basic kit comes with a 50X lens, with swappable lenses up to 200X available as extras.

The included software rounds out a nice package by making it one-click simple to snap images, make short movies, browse stored images, and adjust color settings for good-quality pictures. You need a steady hand to use this tool, though, unless you have a stand. The transfer rate of the image data from the microscope to the computer is slow enough that any excess motion on the scope's part will make a real-time image take a long time to look sharp on your screen. Don't let that make you think twice about using it. The Scope is still more fun than any useful educational tool has a right to be.

With an iBook in one hand and a set of scientific tools in the other, you can take science into the real world with nothing more than a USB cable. **MH**

Work Faster, B



Learn your favorite software inside and out through online training.

By Sandy Brundage

Works 6 and Adobe Photoshop. Tuition for online, go-at-your-own-speed courses is \$25 a month. Or order the tutorials on CD-ROM for around \$80 each. You can check out the first three chapters of any title for free.

The online courses are delivered as QuickTime movies, narrated by tutors who are experts in the given software. When you log on to a course, you get a list of chapters and the total running time. Length varies from a couple hours to twelve, but each chapter is brief. The course introduction starts from ground zero, assuming you know little about the subject ("What is AppleWorks?"), and the complexi-

ty of training material increases as the course progresses. You can work through the tutorials in any order you like, skipping what you already know.

VTC Online isn't perfect. Interaction is limited, and the interface clumsy. Also, skills tests aren't included. But VTC isn't a bad choice for training. Far from it. Having the courses online keeps discs from piling up around your desk, and the tutorials are detailed enough to make sure that everyone will learn something. Plus, it's economical for home users.

We checked out two VTC courses and returned with a report from the classroom:

iMovie 2

Settle in with a bowl of popcorn for two hours of QuickTime movies covering topics like setting up your equipment, capturing video, using transitions, and

Software isn't cheap. Neither is knowledge. But most user manuals are skimpy with the information, and many of us have longed for someone show us how to use a program efficiently. After all, who wants to end up using a \$120 CD as a coaster?

Computer-based training is affordable and offers lessons for the total beginner to the experienced user looking for a few new tricks. Tutorials from VTC and MacAcademy let you learn quickly and cheaply in a way that lets you immediately practice what you've learned. They won't make you a power user, but they'll give you the tools to get there on your own.

VTC Online

VTC Online University (www.vtco.com) delivers 128 tutorials, with more added all the time. That's around 15,000 hours of software training on titles like Apple-

etter, Smarter

exporting video. There's clear narration that guides you through iMovie command by command.

There are a few problems. Its interface is confusing. Control buttons for the movie player are missing in action. There's also no troubleshooting tutorial. Another VTC course offered more bang for the buck.

AppleWorks 6

Twelve hours of AppleWorks training! Too much? Just enough? Depends on what you need. The course starts by explaining what a word processor is, and it slowly moves on to advanced topics like creating a database and file templates. This has a better interface than the iMovie program. Start, stop, and pause buttons for the

QuickTime movie player are visible.

Overall, this course is worth your time.

MacAcademy

MacAcademy's (www.macacademy.com)

Quick Start Speed Learning System is available on CD-ROM and VHS video. Each course walks through commands, proce-

dures, and dialogue boxes, making it easy to mimic the steps. Every CD has an index of topics on the jewel case, handy for people who already know the basic commands of an application, and just want advanced lessons.

A terrific interface sets MacAcademy at the head of the class. A master index tracks what you've looked at, displays the length of each section in minutes, and a list of keywords. Each course also includes quizzes so you can measure your progress. The only annoyance is the inability to resize the movie player, so there's no way to see an uncluttered desktop while switching between windows.

The sheer number of discs, along with the price per volume, makes buying a complete set expensive for a single user. The

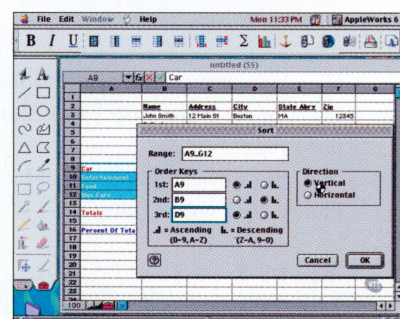
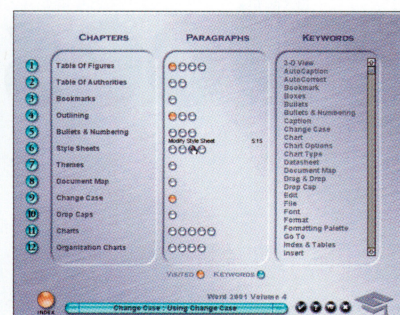
MacAcademy series is a great choice for a business or school, though. And if you just need help with a one area of a program, the cost of a single disc is well worth it.

We signed up for two of the most popular classes; here's what we thought:

Filemaker Pro 5

Filemaker Pro is a god-send if you know how to use it. And a nightmare if you don't.

At \$59 per CD, this six-disc tutorial first explains



MacAcademy and VTC Online prove knowledge is power.

what a database is, then cruises uphill until you could build a relational database half-asleep by the time you're done with the excellent skills tests.

Word 2001

Even if you've used Microsoft Office for years, Word probably has a few tricks you didn't know about. These six CDs (\$59 each) unlock Word's secrets. The first volume covers basic document creation, formatting, and printing. By Volume 6 you'll be watermarking papers, customizing menus, and mail merging without hassle.

The catch? Not a one, although like all MacAcademy courses, buying the entire series is expensive for the home user. **MH**

iSchool

Apple's Learning Professional Development Courses (<http://ali.apple.com/nshelp/welcome.shtml>) are interactive QuickTime tutorials that include hands-on projects along with dedicated forums and mentors. You must be a member of the Apple Learning Interchange (<http://ali.apple.com/ali/join.shtml>) but joining is free and the registration form short. A single course costs \$49. A year's worth of schooling is \$249. There aren't as many subjects as with VTC or MacAcademy, but the most popular applications, like AppleWorks and Microsoft Office, are ready to go.

MachHome

Does New York

By Sandy Brundage and Zack Stern

And lives to tell you about the latest OS X action from the Expo.

We uncovered several applications that will support Mac OS X at the Macworld Expo, along with the operating system's mega-update. Some of the programs are available to test right now, and others will have a full release soon. Here's the scoop:

Mac OS X 10.1

Mac OS X 10.1 was previewed at the Macworld Expo in July, and it should be available near the time you read this. The update further optimizes aspects of X like its overall speed and support for peripherals to make it an option for even more users to run full-time.

The biggest, and perhaps most requested, improvements were to the speed of OS X. Your mileage may vary depending on your system and configuration, but expect to see significantly faster application launch times. Screen redraws like resizing windows and navigating menus are also bolstered.

The interface of Mac OS X has also been updated in some areas. The Dock can now reside on the left or right side of the screen in addition to the bottom. And the now short-lived docklings, which gave access to some functions directly in the Dock, have been replaced by two items. Now instead of having separate items in the Dock to launch and control iTunes or other applications, track controls are available in the standard Dock icon. A new menu in the upper right corner also gives access to frequently used controls like battery and AirPort settings.

File sharing and networking in cross-platform environments has been improved. Support for new protocols,

including WebDAV, make your OS X machine behave just like a Windows box on a PC network. You no longer need a third-party utility to share files.

Mac OS X 10.1 will ship with a final version of Internet Explorer 5.1 in September. The update will cost \$20 for a CD (to cover shipping and duplication costs for current users) or it will be \$129 for new OS X buyers.

Apple, www.apple.com, 800-692-7753

Toast 5

Toast 5 is in development for Mac OS X, but current users can get a preview release of Toast 5 Titanium for OS X right now. Head to Roxio's site at www.roxio.com/toastbeta for the download information.

The beta preview gives OS X users the option to burn audio and data CDs or DVDs. This version only supports external FireWire or internal drives; USB users will have to wait for an update. Some features, like burning Video CDs, are still in progress for the OS X version of Toast.

Roxio, www.roxio.com, 800-518-2432

Virtual PC

Connectix blazes into Mac OS X with a Test Drive release of Virtual PC. Current users of the PC emulator can download the Test Drive from the Connectix website.

The preview version of Virtual PC for OS X has most of the functionality of the previous version for Mac OS 9. Users can run Windows 2000, DOS, and many other PC operating systems. The Test Drive supports Virtual PC 4.0 disk images to smooth the transition. Of course the Aqua

interface and other OS X features are also included.

The biggest issue that users may discover is that the Test Drive isn't fully optimized, and it will run slower than Virtual PC 4.0.

Connectix, www.connectix.com, 650-571-5100

Office 10

It's what we're all waiting for: Microsoft Office 10. All OS X, all the time. And from what we saw at the Macworld Expo, it's going to be worth the wait (which, incidentally, shouldn't be much longer).

Not Your Usual Upgrade

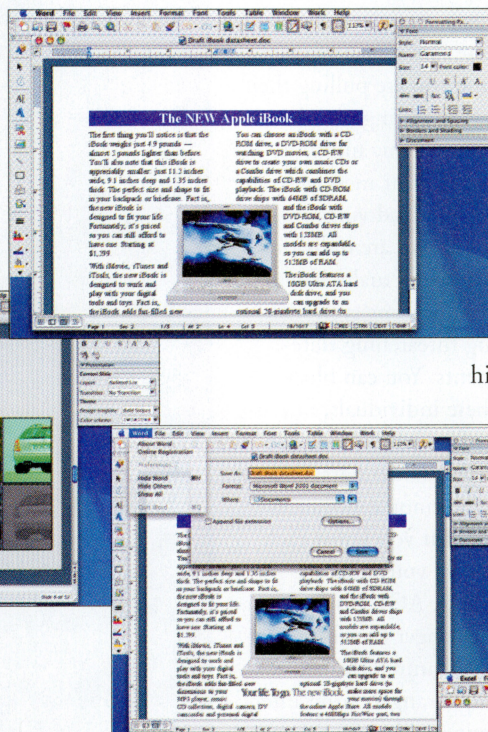
So what's changed? First, the look, which translates to more than just a prettier Office. Each application within Office — Word, Excel, Outlook Express, and PowerPoint — got the royal Aqua treatment. But Aqua also let the design team make buttons easier to read and add over 700 mouseovers, so you'll know when the mouse rolls across a clickable item.

The changes dive beyond skin deep. Office 10 users will find new tools at their fingertips designed to make the suite faster and more efficient while taking advantage of OS X stability features, like protected memory, which means that if another application crashes, Office keeps on ticking. The additions to Office 10 include:

Word. Word now has clear formatting, a feature that lets you adjust characters and paragraphs without reformatting them one by one; you can also apply a default text style and restore hyperlinks throughout the entire document. Multiselection is the other new superpower. Change the format, check spelling, search, and more — wait, didn't the old Word do this? Yes, but now you can select multiple sections

within the Word document and apply those functions. Before it was all or one; you either had to apply the function to the entire document, or to a single selection.

Excel. The new AutoRecover feature automatically saves the latest version of your spreadsheet at user-specified time intervals. If the power goes out, Excel retrieves the last version saved. Also, the keyboard shortcuts in Excel can now be customized in the same way as you're already used to doing in Word.



PowerPoint. Now links can be copied and collected into one PowerPoint Package, which lets you easily transfer movies, sounds, and images to other computers or to CDs. Also, QuickTime movies within PowerPoint can now use animation within video clips.

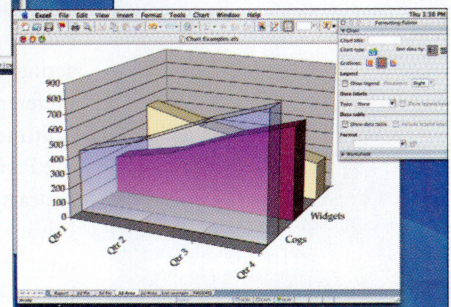
Office 10 for Mac OS X hits stores this fall. Users with Office 2001 for Mac, Word + Entourage 2001 or any stand-alone 2001 application can upgrade to Office 10 for Mac OS X for \$149 directly through Microsoft. This price will be offered for a limited time only once Office 10 is out.

Microsoft, www.microsoft.com/mac, 425-882-8080

ViaVoice

IBM's popular speech-recognition program ViaVoice will be released this fall for Mac OS X. What do you have to look forward to? For starters, the Command Center, Voice Center, and SpeakPad have been redecorated to suit the Aqua interface. But this application also boosted its brain power. Its vocabulary, at 165,000 words, is now twice as big as any previous Mac ViaVoice. And you can help it grow — this version will let you teach the program to recognize the words you need.

Under the hood of the new ViaVoice lies the ability to dictate into any text field in any application, with better recognition accuracy. A topic support feature provides customized vocabularies for subjects like Computers, Business and Finance, Chatter's Jargon, and Cuisine. Also, dictation macros can now be created by selecting a block of text and assigning it a name and function. For instance, highlighting your signature at the end of a document can create a macro called "Letter Closing." Then whenever you need to sign off, just say "Letter Closing," and it's done. ViaVoice users will need to retrain the program for about 20 minutes to optimize recog-



nition, but the program's engine lets it learn faster than ever. The new version is not backwards compatible, but upgrade pricing for Mac Millennium and ViaVoice for Mac Enhanced users is available. Check the website to see what the deal is when it's announced closer to the release date.

IBM, www.ibm.com/viavoice, 888-746-7426 **MM**

Protect Your Privacy on AIM

AOL Instant Messenger has proved to be both a valuable business and social tool. Just like a telephone network, however, instant message systems open the door to mistaken identities and harassment. Occasionally, you may receive messages from people who believe you are someone else. The errant messengers are often children who assume you are pulling their

leg by stating you do not know them, and sometimes, their messages can be rude and vulgar.

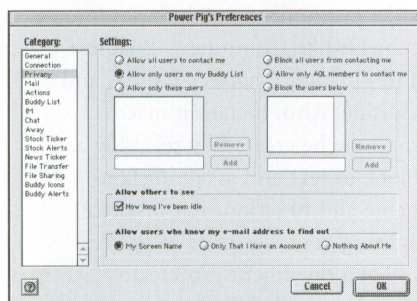
Worse yet are individuals who perpetually harass you, perhaps even making threatening statements. You can block these individuals, but unfortunately, they can

just create another screen name and continue their harassment.

To ensure your family is safe from both minor annoyances and more serious behavior, it's important that you know each

person you speak to online. AOL Instant Messenger has an excellent feature designed to stop strangers from interacting with you. Select Preferences from the Edit menu, and when the Preferences window appears, click the word Privacy in the left column. At the right, you'll see several privacy options. In Settings,

click the option that allows only users on your Buddy List to contact you. Now you can personally qualify each person you interact with online by adding his or her screen name to your Buddy List. Potential harassers will no longer see your screen name when you are online, blocking them from speaking to you. Remember to add the screen names of your friends, colleagues, and relatives to your Buddy List, or they won't be able to speak to you either!



Subscription Questions?

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Application Hotkeys

Mac OS 9 allows users to map an application, document, or URL to a function key for quick access. So, if you wanted to open Internet Explorer without having to search for the application, you could simply establish F1 as an Internet Explorer hotkey. Click the key once, and the application opens immediately.

To assign hotkeys, open the Keyboard control panel. At the bottom of the window, you will see a button called Function Keys. Click the button to open the Hot Functions Keys window. Check-off the first option to ensure you use F1 through F15 as Hot Function Keys, and then move

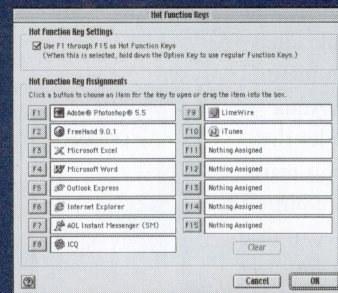
down to Hot Function Key Assignments. Now, locate an application in the Finder, and drag it into the text box adjacent to the function key of your choice. Click OK, close the

window, and then close

the Keyboard control panel. You're now ready for a test run. Click a function key to instantly launch an application. There's no longer a need to sift through window after window looking for the application icon!

Once you memorize the application hotkey combinations, you can switch directly to an open application simply by pressing the appropriate function key. Let's say you're using Internet Explorer, and a chime informs you that Outlook Express has received some mail. Instead of pressing Command-Tab to cycle through open applications or selecting Outlook Express from the applications menu, all you have to do is press the Outlook Express function key. Although it's a minor time-saver, you'll soon

appreciate hassle-free access to your applications.



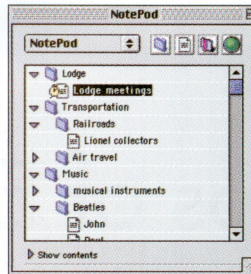
Did You Know...

There are more than **18,000 products for your Macintosh?** Find them all at Apple's Macintosh Products Guide Website:

<http://guide.apple.com/usindex.html>

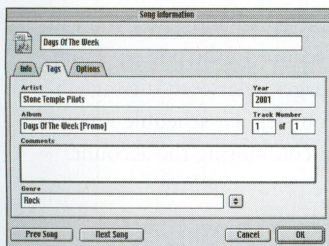
Storing Notes with NotePod

One of the best ways to store notes is NotePod 1.0, by Rick Johnson. NotePod allows you to drag and drop text from documents, web pages, and email onto its window, immediately creating a new note. The note is given a title, which is then added to a hierarchical list. Notes can be filed in editable folders, too, allowing you to intelligently separate telephone numbers and addresses from recipes and product information. NotePod also supports full font formatting, letting you store notes with multiple typefaces, sizes, and effects. You can even add clickable URLs to quickly access relevant web pages. The utility is fully searchable, and is compatible with both Mac OS 9 and Mac OS X. You can find NotePod 1.0 at <http://personalpages.tds.net/~graffix/software/notepod> (800k).



Cleaning Up MP3 Tags in iTunes

Many of the MP3 tracks you download will not have a proper set of identification tags. The Song listing often contains both the track and artist names, but the Artist listing is often blank (as are Album and Genre listings). So long as you know these details yourself, you can edit the MP3 tags yourself. The easiest way to correct the listings is to click once on the text to be modified and then quickly move the mouse pointer off that text. The item will then become editable, and you can enter the proper information. Another way to edit the tags is to click on the song in question and press Command-I. A Song



Information window will appear. Now, click on the Tags tab at the top, and you'll be able to enter the song title, artist, album, genre, and even the publication year and track number.

Mac OS Update Watch

Mac OS X 10.0.4 Update

Apple's most recent update to Mac OS X provides better battery management for portables, additional Classic compatibility, expanded support for USB devices, and compatibility with the new 17" Apple Studio Display.

iBook Audio Update 1.3.6.

This update improves the quality of sound output on Apple's most recent iBooks (dual USB). It is not intended for earlier model iBooks. The update requires Mac OS 9.1.

DVD Player 2.7

This maintenance update to Apple's

DVD software fixes a number of compatibility issues and includes a number of minor enhancements. The software requires Mac OS 9.1 and is intended for use with iMacs, iBooks, Power Macintosh G4s, and PowerBook G4s.

PowerBook G4 DVD-ROM Update 1.0

This firmware update improves support for the insertion and mounting of CDs and DVDs on the PowerBook G4. The firmware update requires Mac OS 9.1.

Use your Software Update control panel or system preference to get these updates, or visit www.info.apple.com/support/downloads.html

MacHome Quiz

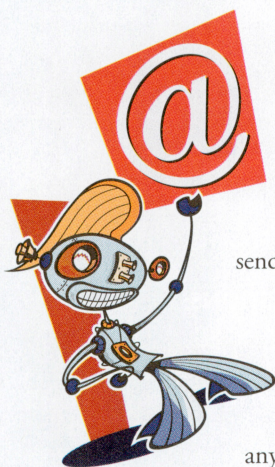
Whether you've forgotten more about the Mac than most people know or you're new to the computer, it's fun to test your memory. Here are some questions that will leave you with a few more tricks up your sleeve. And if you have quiz questions for us, stump us as letters@machome.com!

QUESTIONS:

1. What's the quickest way you can place a file into the trash?
2. How do you add a custom icon to a folder or document?
3. What must you do to automatically open a new Finder window while double-clicking a folder in Mac OS X?
4. What is the term for a message, image, or feature hidden in an application by its programmers?
5. How do you create an Internet File Clipping?
6. What's the quickest way to power-off your Macintosh?
7. How can you enlarge the text in Mac OS 9's Finder?
8. How can you eject a disk, aside from dragging it into the trash?
9. How many devices can you theoretically connect to a single USB port?

Answers on page 51

Two Scoops of Email



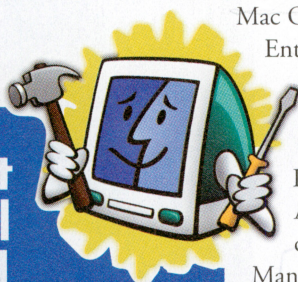
Get the most from your email with this double feature; learn to use a Mac.com account with Outlook Express or Entourage, and make your mail look like it always originates from a single account even if you can't always send from that location.

Use Mac.com Mail

Mac.com email gives you your latest messages and lets you send mail from any location. To create an account that's free with Mac OS 9 or later, visit www.apple.com/itools. Apple's Mail application in Mac OS X can manage the account. But you can still get your Mac.com messages with Mac OS 9 and Outlook Express or Entourage.

What You'll Need

1. Mac OS 9
2. Entourage or Outlook Express



Step 1 Create a New Account

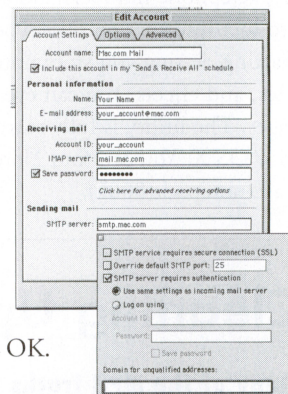
In the Tools menu, select Accounts. Click New, and click the Configure Account Manually prompt if necessary. Select IMAP from the pull-down menu. Name the account, and begin to fill out the fields.

By Zack Stern

Step 2 Configure the Account

Fill-in the Name field (this is how your outgoing email will identify you in the From field). Add your Mac.com email address. In the Account ID section, enter the part of your Mac.com name that precedes the @ symbol. The IMAP server should be "mail.mac.com". Add your password; if you're the only person who uses that computer, check the box to save the password. For the SMTP server, type "smtp.mac.com." Click the box below that field for the advanced sending options. Finally, click the box stating that the

SMTP server requires authentication, and leave the radio button at default so that it uses the same settings as the incoming mail server. Click OK.



Step 3 Send and Receive Mail

If you now have multiple email addresses, you can choose the Mac.com account in the pop-up From menu of outgoing messages. Mac.com messages will be received with your regular schedule if you checked that box when configuring the account.

Send Mail from Another Address

If you travel, even just between your home and the office, you may run into difficulty sending email messages. Often, ISP accounts will require you to be logged-in through your normal dial-up or high-speed connection to send messages. And work accounts may require you to be in the office to send mail. The main reason for this inconvenience is that unscrupulous parties may control one of the mail servers if external access is granted, even for you.

But you can trick your recipient of your messages to think that you're sending from the same account all the time, even if you have to travel between ISP connections. They can always reply to the same address.

Tell Us What You Think!

We look forward to hearing from our readers. Write us a quick note and tell us what you think of this month's issue!

www.machome.com/feedback

Step 1 Record Your Current Settings

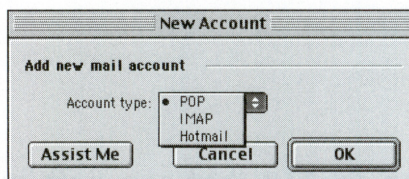
In the Tools menu, select Accounts.

Locate the account that you want your outgoing email to identify with. So if you want your mail to say that it came from

work, even if you're relaxing on a beach (or as relaxed as you can be while configuring email), choose that work account. Note what it says in the parentheses — it will likely say (POP) — and open it. Take a screenshot of that box by pushing Command-Shift-Caps Lock-4 and clicking the window. Locate the image in the root level of your hard disk and open it for reference.

Now locate the account from which you are able to send mail. Perhaps it's an

Earthlink or DSL account; it's most likely to be the one from your ISP. Take a picture of the settings screen for that one, too.



configure the account manually if prompted. Next, choose the letter abbreviation that you noted in Step 1 from the popup menu. Click OK.

Step 2 Create a New Account

Go back to Entourage or Outlook and click Cancel on the open account. In the Accounts window, select New, and again

Step 3 Configure the Account

Duplicate the settings from the first picture into the Edit Account window, but stop at the Sending mail section. Open the second picture, of the ISP account, and transcribe that Sending mail information into new account. Finally, make sure

that the box says not to include the account in your Send & Receive All schedule. Also make sure that it's named something distinct, like Send Work Mail At Home.

Step 4 Send Messages

Create a new message, and choose your new account setting from the popup menu. The outgoing message will say that it came from your first account, although it will actually be sent through your second, ISP account.

You can usually create the same effect by copying the functional outgoing account's Sending mail information and pasting it into the account that will masquerade as the origins of the message. However, that way is harder to modify regularly.

Regardless, if you're stuck using multiple accounts to send mail and you want people to only have to reply to one, this trick can keep your messages and contacts neat. **MH**

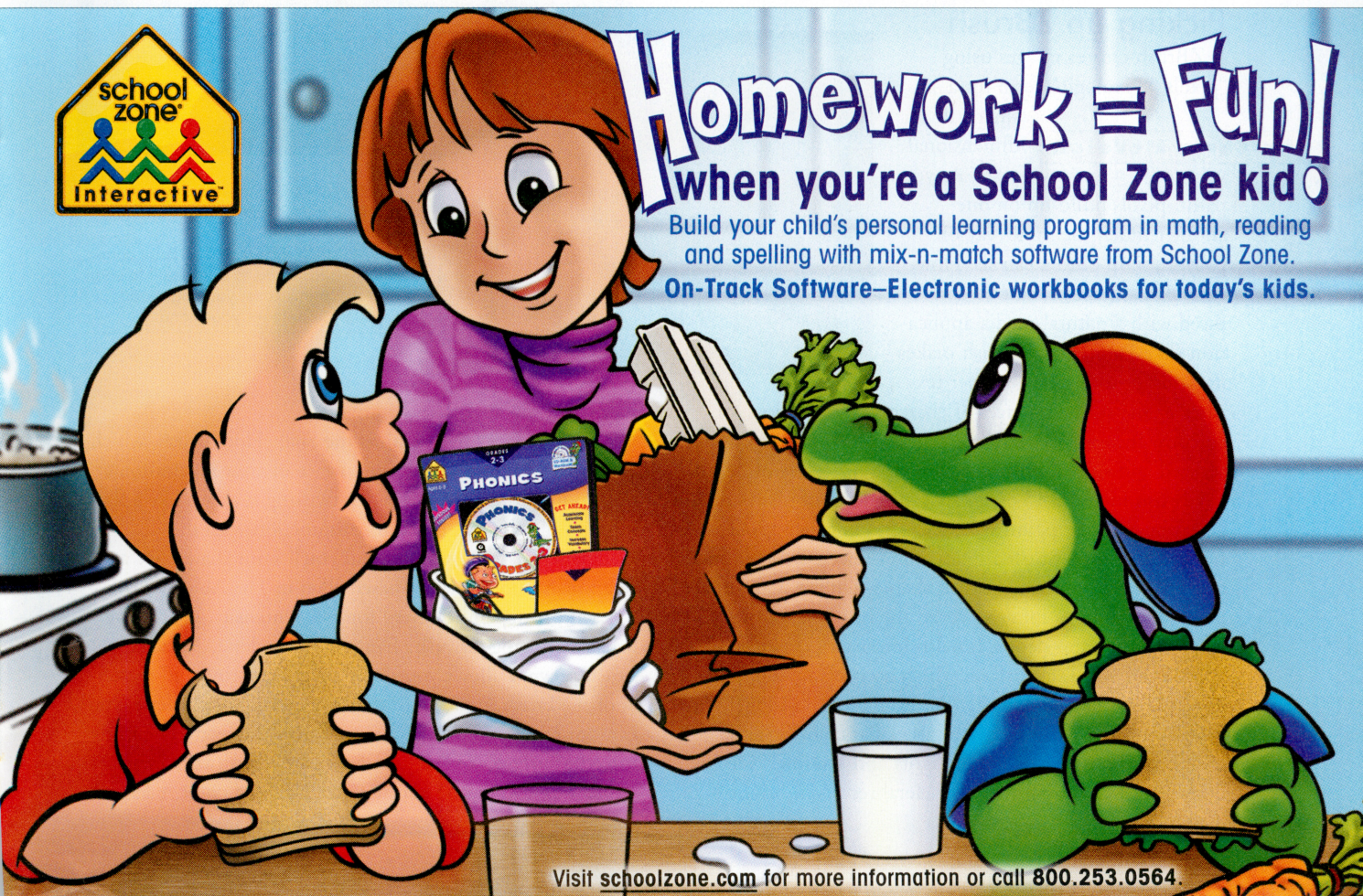


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ZBrush 1.23 versus Amoprium Pro

Creative Tools Take Unique Approaches

Artists are forever searching for tools that can both extend their skills and ease the occasional tedium of creativity. Two new applications available for the Macintosh aim to do just that.

Pixologic's ZBrush is a revolutionary (but confusing) creative application that allows artists to produce two-dimensional illustrations with three-dimensional qualities. On the other hand, Electric Image's Amorphium Pro is a 3D application geared towards artists who would prefer to mold three-dimensional objects like clay rather than edit overly technical wire frame meshes.

Picking up ZBrush

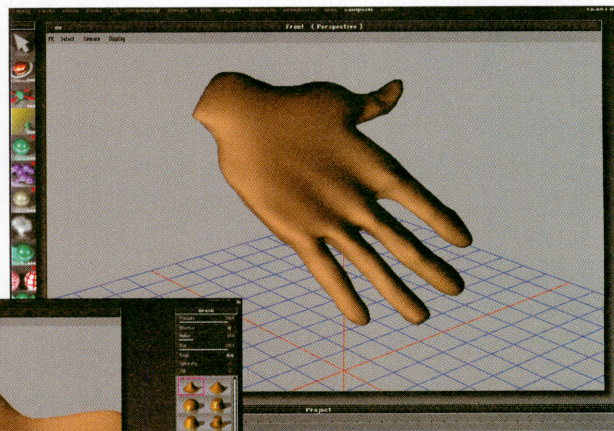
ZBrush creates images using "pixols," Pixologic's term for a

smart, three dimensional pixel. As you

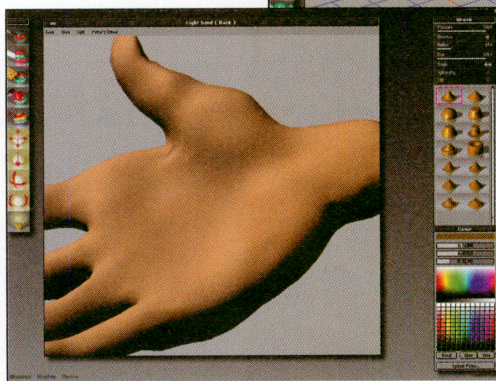
By Chris McVeigh

paint, pixols build up on one another much the same way oil paints clump onto a canvas. However, ZBrush should not be confused with a natural media application (like Painter 6). ZBrush makes no attempt to duplicate paper textures or the subtle nuances of charcoals, watercolors, or crayons. Instead, ZBrush's set of tools allow you to create stylized and surreal illustrations with a real sense of depth.

ZBrush includes a host of specialized paintbrushes that go far beyond the painting tools found in other applications. The SimpleBrush applies a user-selected color using one of several predefined brush shapes. Unlike traditional illustration applications, however, the brush shapes vary in height, width, and depth. It's also important to select an appropriate material surface, which controls how light is refracted by the paint stroke. For example, choosing Toy Plastic provides a surface with rather flat coloring and reduced contrast between highlights and shadows. On the other hand, choosing Intensity Metal results in bright high-



Amorphium's Composer allows you to arrange your 3D objects as you like.



AMORPHIUM SHOT 2: The Point component allows you to add detail to your objects. In this case, you might add lines to the palm of your hand.

lights and much darker shadows.

Another innovative brush is the SnakeHookBrush, which allows you to simply grab the surface of your illustration at any point and drag it outwards, twisting it about like a flailing tendril. Use this brush in conjunction with the GelShader material surface, and you'll immediately see a resemblance to the water-based alien in *The Abyss*.

Each brush can be edited for color intensity, depth, and brush size using ZBrush's handy Draw palette. An active brush preview allows you to see shape, coloring and material of the brush, rotating in real time. Using this palette, you can opt to apply brush strokes negatively, effectively cutting into the surface of your existing image. Brush strokes are applied on top of one another, like layers of paint. Each

new brush stroke reflects the shape of the surface below, instead of simply obliterating the lower stroke. This gives depth and texture to every pass of the brush.

Although some may fault ZBrush for not having dodge and burn tools to provide highlight and shadows to existing surfaces, this would be somewhat redundant. ZBrush's Light palette is designed to provide realistic highlights and shadows. Since pixels remain three-dimensional, repositioning or recoloring light sources alters the highlights and shadows on the image.

ZBrush also provides a selection of 3D tools, allowing you to add true three-dimensional objects to your image. Several basic shapes are provided, including spheres, cubes, cylinders, and cones. Using the Tool palette, you can twist, skew, bend, and squeeze these basic forms to create unique objects for your illustration. Once you've come up with an interesting shape, you can apply a color, surface material, and even a bitmapped pattern. ZBrush also lets you push and pull at the object, further molding it into a unique shape. You can then paint right on the surface of the object with its collection of capable brushes. The object can then be move, rotated, resized and finally, placed within your existing image. Sit it low, and it may be partially obscured by your previous brush strokes; sit it high, and it may float over your illustration. Once you're satisfied with the object, it is converted to pixels and becomes a permanent part of your illustration. Judging from Pixologic's online gallery, Zbrush users must master these 3D Tools in order to create compelling illustrations.

Amorphium Injection

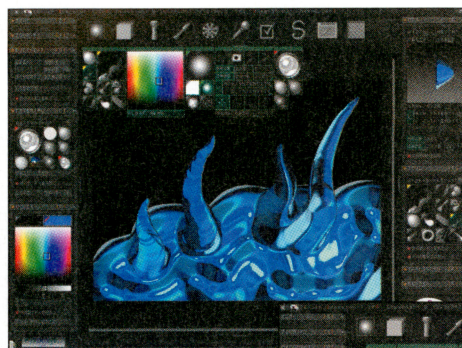
Electric Image's Amorphium Pro is a 3D application aimed at artists who'd prefer to avoid the arcane wire frame meshes of many other 3D modellers. Instead, Amorphium Pro allows artists to mold three-dimensional objects like clay. Tools allow you to pinch and pull the object, carve features onto its surface, smooth out unwanted bumps or dents, and even

smudge details together, all in real time. A concise brush palette allows you to modify the shape, pressure, and radius of the your tools. A handy zoom tool allows you to get in closer for subtle detailing. And furthering the clay metaphor, Amorphium Pro provides a Potter's Wheel that lets you to carve and pinch objects as they rotate.

The application is divided into 12 distinct components that help clarify the design process. Among them are Tools, which is where you mold the object; FX, where you can twist, skew, and apply special effects; Paint, which allows you to paint directly onto the object; and Mapper, where you can apply surface textures. Once of the most clever components is the Wax module, which allows you to add geometry to the object like dollops of wax. It's an easy way to create tentacles and limbs without having to endlessly pinch and pull the object. Another ingenious component is BioSpheres, where you can create spheres that happily merge into one another. When pulled apart, the spheres struggle to stay merged, as if there were an invisible magnetic field keeping them together. This set of tools can help you quickly create compound objects, such as bones, with minimal effort.

Once you've created an object, you place it into the Composer. Here, you can arrange the objects as you like, set the lighting, apply atmospheric conditions, and coordinate animations via a key-frame timeline. Clicking the camera button in the tool palette initiates rendering of the scene. You can export the finished project as a JPEG or TIFF image, or as a QuickTime or GIF animation.

One of Amorphium Pro's most curious features is its ability to export Macromedia Flash illustrations and ani-



Among other things, ZBrush allows you to paint with highly refractive gel.

ZBRUSH SHOT 1: You can add true 3D elements to your image and distort them as you like.



mations. The highly detailed nature of 3D design is certainly an odd mix with the flat simplicity of Flash. The resulting animations are often jarring and blocky, perhaps better suited to rock videos than corporate America.

Interface Displaced

ZBrush's biggest problem is its non-standard user interface. For reasons unknown, Pixologic decided to abandon absolutely every interface element familiar to Mac users and create its own user experience. It fails miserably. Novices and experts will be equally befuddled by the muddled interface. The relationship between the drawing tools (and their many options) is often unclear to the uninitiated, and many variables are controlled with hidden sliders. Standard Mac OS menus have been eschewed in favor of endless palettes. Open and Save dialogs cannot be found in the menu bar; rather, they are buried within a Document palette. There is no command to close the active window — you must either press command-N to clear the current illustration, or open a new illustration in its place. There are far too many similar inconsistencies to list them all here.

Unfortunately, the manual is also of limited help. Its tutorials lack detail and are often far too simple to be useful. The poor interface and questionable documen-

tation result in an incredibly steep learning curve. ZBrush requires a great deal of patience and experimentation to master.

Amorphium Pro also introduces a customized interface, but it fares much better than ZBrush. The application's tool palettes are clear and intuitive. It's easy to figure out how to create a three-dimensional object, mold it into shape, and paint highlights onto its surface without consulting the manual. (The same task in mind-numbingly confusing in ZBrush.) Although the manual is a little light, it's clear and almost always helpful. Amorphium Pro's only significant interface issue is its small menu font (intended, no doubt, to maximize screen real estate).

Additional Issues

ZBrush is hampered by its limited support for three-dimensional objects. Only one 3D object can exist at a time. Once you have shaped, colored, and placed the three-dimensional object, it is converted

to pixels and can never be edited again. You must get it right the first time, or rebuild your illustration. Thankfully, the application supports unlimited undos, so you can take a few steps back if required. (Since Amorphium Pro is a true 3D application, however, its objects remain editable at all times.)

Amorphium Pro is obviously tailored towards the creation of imperfect organic objects rather than machinery and other technically perfect objects. Although the application performs well, it may not be the best choice for industrial designers. Another minor irritation is that the application's paintbrushes do not reduce enough in size to add fine detail to the surface of smaller objects.

The Final Decision Each of these applications has features that appeal to different artistic needs. ZBrush has an incredibly powerful set of faux-3D tools, but its poor interface design makes it difficult to harness the application's

power. Amorphium Pro's inherent simplicity make it much more approachable for novices, but like ZBrush, mastering the application requires practice and patience. **MH**

rating ★★★★★

Amorphium Pro 1.1
\$199, Electric Image
www.amorphium.com

Great modeling tools, easy-to-use, powerful

Small menu fonts

rating ★★★★★

ZBrush 1.2
\$293, Pixologic
www.pixologic.com

Clever mix of 2D and 3D technologies helps create surreal images

Bewildering, non-standard interface significantly hampers the learning curve; poor manuals.

30GB PocketDrive

The LaCie PocketDrive is one of the best portable hard drives to date. It combines high speeds, a small size, and the versatility of USB in addition to a FireWire connection. It has a padded, rubber shell for protection because you'll want to take this with you everywhere. The PocketDrive is the right accessory for anyone who needs more space and also needs to be mobile; carry the PocketDrive between home and work computers or keep it with a PowerBook or iBook.

Available in sizes of 10GB, 20GB, and 30GB, the PocketDrive packs enough room to edit video or store thousands of audio files. Sure, you can keep anything



on it; store favorite applications to always have ready for any computer.

The FireWire connection laughs at the days of SCSI. Just plug it in, and it works, even if your Mac is on. With the FireWire connection, the PocketDrive uses just one cable; power is sent through FireWire to operate the drive. And it's

quick enough to capture and edit DV movies.

The USB port is best used for unpredictable situations; you never know if you'll find an old Mac that lacks the faster FireWire bus. An

included power cable runs the drive when on USB, and speeds aren't the same as FireWire; don't expect to edit or capture video while using USB.

The PocketDrive is a little longer — but thinner — than most mice; it could fit in a coat pocket or a large shirt pocket. This size makes it ready to go any-

where, and its rubber shell will protect it on trips.

Everything needed to get started is included with the PocketDrive. LaCie provides disk formatting software, a power cable for USB, a USB cable, and even two FireWire cables for desktop or laptop situations.

The Final Decision The LaCie PocketDrive delivers the speed, size, interface choices, and cables that let it fit into unpredictable situations. Shuttling between multiple computers or living with a laptop, the PocketDrive is just right for expansion.

— Zack Stern

rating ★★★★★

LaCie Ltd.
\$580
www.lacie.com
503-844-4502

Quick, small, fully-accessorized

None

Graphire2

If you're interested in a small drawing tablet, the Graphire2 is a no-brainer. Its smooth stylus, variable levels of pressure, and cordless mouse make it a complete package. Photoshop LE and Painter Classic are also included. The only flaw is that it's easy to lose track of the mouse position relative to the tablet.

A single USB cable connects the Graphire2 to your Mac. After installing the Wacom software driver, everything should be running. (A Mac OS X driver is promised, but wasn't ready at press time. Check www.wacom.com/product-support for updates.) This tablet even works without the driver if you need to troubleshoot extensions or have other startup problems.

The feel of the stylus and the control it gives make the Graphire2 great for editing photos or other graphics. 512 levels of pressure sensitivity let you care-

fully feather lines.

Turn the pen over to automatically select the eraser tool and rub-out any problem. A two-button rocker switch can also be customized with the control panel to drag, control-click, or input another action.

A cordless mouse makes the Graphire2 suitable to sit next to your keyboard after you toss the old mouse. Its three customizable buttons and scroll-wheel are comfortably designed. And while the original Graphire had a mouse, Wacom listened to criticism and made the Graphire2 mouse a slightly weightier and more substantial accessory.

The only problem with the Graphire2 is that while the edges of the tablet pick-up pattern are outlined, the mouse may often slip over that boundary. Because you're not going to be looking down at the mouse regularly, some sort of bump



or other ridge would point out when you reach the edge of the active surface.

The Final Decision

The mouse tracking annoyance aside, the Graphire2 is an excellent package. On top of the control and function the a stylus, it includes a capable mouse. The Graphire2 is the best way to get started manipulating photos and images.

— Zack Stern

rating

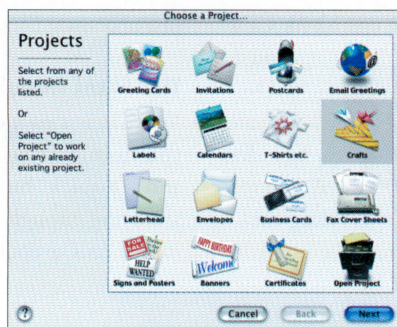
Wacom Technology Corp.
\$99
www.wacom.com
800-922-6613

 Great tracking and control for mouse and stylus

 Mouse often slides off active area

Print Explosion Deluxe

Print Explosion Deluxe lets you use your printer to create hundreds of projects. It comes with thousands of design templates for documents and crafts, and thousands of clip art and stock images. Print Explosion packs everything you need to create, essentially, anything, into three CDs and a huge index of the files. The only drawback to Print Explosion is that all of these options can be overwhelming. Even the magnitude of alterations to make to the pre-created templates is great. If you can get through the thousands of choices, Print Explosion Deluxe is the right software to create printed results.



After launching Print Explosion, you'll be faced with the first of many options. Pick a category for your project — like Business Cards, Envelopes, or Greeting Cards — and then locate a specific example of something you like. New windows

let you alter the text and any image elements in the file. In addition to just changing the text, tools let it warp, bend, and create other stylized effects. You can import one of the thousands of images or even one of thousands of quotations from a searchable database.

Print Explosion is loaded with options. You can create basic, practical business items like letterhead stationery and fax cover sheets. But beyond that, you can churn out custom CD labels, calendars, T-Shirts, paper airplanes, and origami creations. It's tough to pick one

to get started.

The only problem with Print Explosion is that all of these options take time to navigate and learn. However, a large manual and reference lists all of the art in the package, so while locating the perfect image may take time, it does progress in a linear process.

The Final Decision Print Explosion Deluxe is all you may ever need to create home and business documents and projects. Mac OS X support rounds out a complete package.

— Zack Stern

rating

Nova Development
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www.novadevelopment.com
818-591-960

 Vast number of templates, fully customizable

 Discovering all the options takes practice

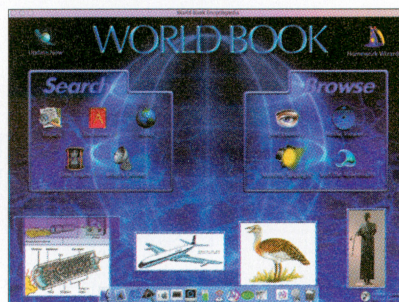
World Book 2002

World Book 2002 makes writing a paper (or review) fun. Brilliantly organized, with an Aqua interface that has a brain behind its pretty face, the encyclopedia spans centuries of history and keeps up with current news through monthly Internet updates.

The two-CD set packs as much information as 22 volumes of the print version of the encyclopedia. There are multiple ways to dive into that knowledge: search, of course, a randomizer that tosses up a handful of multimedia entries on a splash screen, and a Timeline feature that displays all the historical events from a user-defined era.

Its internal word processor functions are sophisticated enough to write a professional report. If you don't know how to start, the Report Wizard walks you through the process from outline to bibliography by asking questions and letting

you fill in the blanks. World Book 2002 also makes gathering information easy. As you browse the encyclopedia, highlight and bookmark tools mark spots that you want to refer back to. A drop-down menu catalogs each marked item so you can return with a single click. Each feature of World Book 2002 is interrelated. For instance, if you're searching for "Martin Luther King, Jr.," you'll not only find out about civil rights activism, but also see a list of related articles along with audio and video clips. If there's a word that doesn't make sense in the article, double-click, and the built-in dictionary spits out a definition. The encyclopedia entries are kept fresh thanks to the web. At the end of each month, click Update, and the program will download a list of newsworthy



events from that month and save the information to the database on your hard drive.

The Final Decision

World Book 2002 is for OS X only. This is a superpower application, ideal for anyone from students to grandparents. If this doesn't give you a reason to upgrade your Mac's operating system, nothing will.

— Sandy Brundage

rating ★★★★★

World Book
\$60
www.worldbook.com
800-967-5323
Requires: Mac OS X

👍 Adding interface, interrelated functions, stays current, useful multimedia

👎 None

VeloCD 16x10x40x

The VeloCD is a useful burner. It's quick, with speeds of 16x10x40x (write, rewrite, read), and it can burn a full disc in less than five minutes. It handles multitasking well; it's even burning while other tasks, like this review, are in the foreground. It ships with enough toys and tools to get started, too. While its case design is neutral, if big, the largest flaw is the big, flashing strip of light on top of the plastic.

This burner is quick. While more expensive drives can save a couple minutes, the 16x write speed is enough for almost any user. Its BurnProof technology makes it unlikely to burn a bad disc;

in our tests it never failed.

The VeloCD also includes an effective software and accessory package to get you started. Toast 4 drives the burner; a bundled Toast 5 would have been great, but Toast 4 is still effective. A FireWire cable plugs it into your Mac. A few

blank CDs and a CD-RW are included. A pen for labeling the discs is even provided.

But the VeloCD isn't perfect. It would have been a nice touch to let it run from a single, bus-powered FireWire cable, but because it'll stay on your desk, the separate power cable isn't a big drawback. Also, the VeloCD is large — even more so than most full-sized hard drives.

The biggest flaw of the VeloCD is its access light. A strip of blue runs most of

the length of the drive. This blue light shines when the drive is on, and it rapidly flashes whenever the drive is in use. It's distracting and unnerving to try to work while this strip is flickering like a bad fluorescent bulb. In addition to doing so while burning, it flashes when just accessing files.

The Final Decision While bulky, the VeloCD is a rounded burner. It will keep you from wasting discs on bad burns, and it's quick. But its access light is annoying enough to make this drive a mixed unit overall.

— Zack Stern



rating ★★★★★

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can be yours
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Please allow
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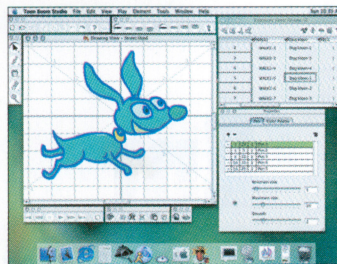
Toon Boom Studio

Toon Boom Studio is a two-dimensional animation application that allows aspiring artists to create professional cell-based animation. The package includes a powerful scene planner and a clever lip-sync tool, but it's slightly tarnished by a cluttered interface.

Toon Boom Studio is a vector-based application that treats brush strokes as a series of curving lines rather than a series of pixels. To get you started, you can import artwork from vector-based applications such as Illustrator or Freehand. Pixel images can also be imported for use as backgrounds and other static objects. Completed movies are exported as either Macromedia Flash or QuickTime documents. You'll still need to use Flash 5.0 if you want to add interactive features to your animations, however.

Toon Boom Studio encourages the use

of a drawing tablet so that the creative process is immediately familiar to traditional animators. Onionskin layering allows the artist to see multiple frames at once so that the animation can be perfected. The package's powerful scene planner allows you to plot motion paths for objects over time, helping you create animations of basic actions — such as the setting of the sun — with minimal effort. The objects can even be rotated, resized and distorted as time progresses. The package also lets you organize your two-dimensional objects on a three-dimensional plain. You can then move the camera over time to give the animation a real sense of depth. One of Toon Boom's most ingenious features is its lip-sync tool, which can analyze a voice track for phonetic patterns and suggest lip positions. You can then refer to its suggested mouth shapes to draw similar positions



on your characters.

The only real trouble with Toon Boom Studio is its spate of unnamed tool palettes. The authors ought to merge several palettes together to minimize clutter in a future release.

The Final Decision Despite minor interface issues, Toon Boom Studio is an excellent creative tool for both amateur and professional animators.

— Chris McVeigh

rating

Toon Boom Technologies
\$375
www.toonboomstudios.com
Requires: Mac OS X

 Smart animation features, handy lip-sync generator

 Cluttered interface

Stuffit Express 1.1

Aladdin's Stuffit Express lets you automate otherwise cumbersome data transfers tasks, such as sending files via email and transferring files via FTP. Unfortunately, the product's price tag is exorbitant.

To send a file to a colleague, you normally prepare the file, open your email application, address and title the message, jot a short note, compress the file and attach it to the message, and then send it off. Stuffit Express automates this entire procedure. Once you've created a Stuffit Express Drop Box, you can simply drop the file onto its icon. The Drop Box handles the rest — all in the background, allowing you to continue your work.

Creating a new Drop Box is relatively easy. You simply add actions (such as archive, upload, and email) and edit their parameters. To create an FTP Drop Box, for example, you need only select FTP upload, enter your FTP address, and then click a button to create a Macintosh Drop Box. Dragging any file on that Drop Box automatically transfers it to your server.

One of the main goals of the application is to allow businesses to create Drop Boxes for clients to standardize the transfer of files. A

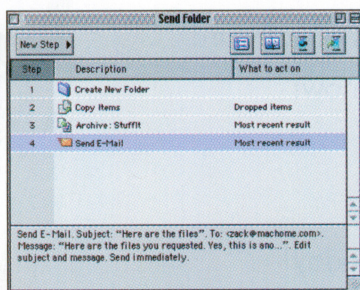
professional print shop might develop a Drop Box for its clients that includes an email form, file compression, and direct transfer of the files to the print shop's server.

Considering that Aladdin gives away its prized product, Stuffit Expander, it's little wonder the company wants to

ensure it reaps the profit from its other titles. That's really too bad for Stuffit Express. The product performs flawlessly and certainly appeals to home business owners who send files on a frequent basis. The minimum cost is \$400 (for a mandatory five-client license), however, putting it out of reach of most small businesses.

The Final Decision Although its simple automation of file transfers is a helpful tool for home business owners, Stuffit Express is grounded by its hefty price.

— Chris McVeigh



rating

Aladdin Systems
\$400 for 5-Client License
www.aladdinsys.com

 Easy to use, completely customizable, efficient automation

 Unreasonably priced for small businesses

MYOB AccountEdge

Account for This Business Manager

AccountEdge for Mac OS X and 9 is a versatile accounting solution for small and middleweight businesses.

AccountEdge is not only a full-featured accounting software package but a business management tool that boasts features like contact tools, customizable card files for clients and inventory, and job management controls. It keeps track of your money and customers.

The installation process was lengthy but rather painless. Even though AccountEdge was built for OS X, the initial stage of installation launches Classic.

Whether you are setting up a new company, importing data from another application, or opening existing files in MYOB, AccountEdge makes strides in helping you get work done quickly and easily.

When creating new companies, the built-in assistant takes you through a step-by-step process that allows you to select a billing cycle, invoice type, and business category. AccountEdge includes templates for over 95 types of businesses such as landscaping, photography, religious organizations, and computer dealers. If you can't find your business type in the list of preformatted layouts, you can customize one to suit your needs.

By Peter Balint

After creating your file, options are available through photorealistic icons that blend well with the look and feel of OS X. Sales, inventory, payroll, and card files are just a few of the selections available. Once you have made a choice, AccountEdge presents screens that are organized with tabs and pull down menus — a plus for keeping streamlined, uncluttered windows.

The Card File, one of the most powerful features, lets you manage a business rather than simply keeping tabs on the inflows and outflows. The Card File can be used as a contact database that retains information like customer purchasing history and email information. It functions throughout the program. For example, you can create a quote for a client, then elect to deliver it using email. AccountEdge retrieves the client's email address and sends a professional-looking PDF document using the default email application. At any time, the quote could be con-

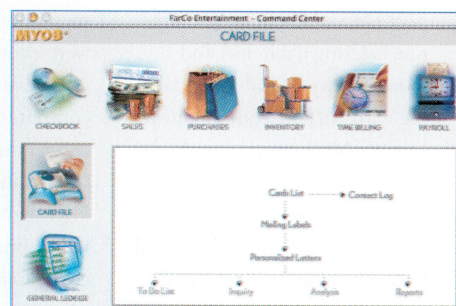
verted to an order or invoice. With functionality like this, it is quite possible to send a quote to your client before you have ended your telephone conversation with him.

OfficeLink is a program within AccountEdge that creates mail merge letters and spreadsheet reports. Letters of introduction, thanks, and collection can be selected from the templates provided, but they require Microsoft Word and Excel which, as of yet, are not available for OS X. This means another trip to Classic — for now anyway. Without Word or Excel, you can't use these features. AppleWorks support would have been nice.

The MYOB Learning Center is an Internet-based help resource that answers a wealth of questions from account setup to accounting procedures. Seasoned number crunchers and new users will find the Learning Center valuable.

The Final Decision

Overall, AccountEdge is a robust accounting and business management tool despite needing Word or Excel for letter and record templates. The product lives up to its name by offering an edge over standard accounting packages. **MH**



rating

MYOB AccountEdge
MYOB US, Inc.
\$249
www.myob.com/us
800-322-6962

 OS X look and feel, comprehensive online Learning Center, integrated Card File, easy to use

 Installation and OfficeLink require Classic mode



FriendlyNet FR3002AL

★★★★★

Asanté Technologies

\$349

www.asante.com

800-566-6680

The FriendlyNET router with bundled 802.11 wireless support is a viable choice for anyone creating a wireless and wired network. Fully-compatible with AirPort equipment, the FriendlyNET router is at home with Macs; setup was direct and intuitive. If you need large support for a wired network, you'll have to add additional wired routers because the FriendlyNET model allows only two

10/100 BaseT Ethernet connections. But its ease in setup outweighs this limit.

A home or small business that needs to connect computers for sharing an Internet connection, file servers, or printers needs a router. The issue is more complicated when you want to use some computers wirelessly and some machines, like desktops, will stay put. The FriendlyNET router works on all fronts.

It was simple to connect the FriendlyNET to DSL. Its documentation and on-screen help were enough to get going immediately. Adding wired computers was just a matter of connecting Ethernet cables.

The only downside to the FriendlyNET router was that you're limited to two wired computers. Otherwise, this simple router is a joy to network.

— Zack Stern



Sensiva Classic

★★★★★

Sensiva, Inc.

Free

www.sensiva.com

If you've ever used Graffiti, the handwriting recognition program on the Palm handhelds, you'll feel at home with Sensiva. Move the mouse in specific patterns, like an S, and the Mac will respond by saving a file, for example. It's called gesture recognition, and it works like a charm.

A tutorial explains each gesture, grouped into application-specific motions. It doesn't take a lot of study to get comfortable.

As in the above example, the gestures make sense. To use the program, just tap the Command key whenever you want to make a gesture, then draw it anywhere on the screen with the mouse.

The computer responds as soon as the mouse stops moving.

The one flaw is its intolerance. Some letters, such as R (for reloading a browser page) were difficult to get recognized, even with gesture recognition set at its least sensitive. To get the most out of this program, you'll need a smooth — preferably optical — mouse.

Overall, using the mouse in lieu of keyboard combinations saves time simply because it's so intuitive once you know the alphabet. Kids, people with disabilities that have difficulty using the keyboard, or anyone will find that Sensiva makes life easier.

— Sandy Brundage



custom cards

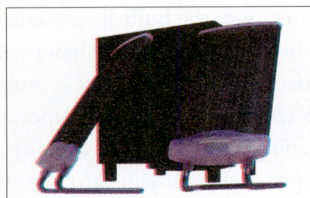
500 business cards \$85

500 postcards \$99

4/1 = full color front : b&w back

www.4by6.com

photography : gregory cowley



iM-700 ice

★★★★★

Monsoon

\$169

www.monsoonpower.com

1-877-722-8346

I had my doubts about these speakers. But as soon as I opened the box and took these puppies out, I knew I was in for a treat. Not only did they work through USB without any extra software, they sound great.

USB speakers haven't always been easy to use, and since they usually need to be plugged directly into the Mac (no hubs allowed), they can take up needed USB slots. But after hearing

the quality of CD audio played through these bad boys, I was happy to give up the slot.

The only problem I found with these speakers is the "puck" design. Instead of a built-in volume control, the system uses a hockey-puck shaped device to mute and change the volume. It's a nice touch, but the subwoofer's bass and power controls aren't adjustable via the puck, thus ensuring you'll have to crawl under your desk to turn off the whole set up. This is made up for by a mute button on the puck, but it still means you'll be on your knees every now and then.

Aside from this relatively minor quibble, however, the iM-700 ice speakers are a great addition to any Mac setup. They have top-notch sound quality and look terrific.

— Alex Handy

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Now Shipping

New products for
your Macintosh



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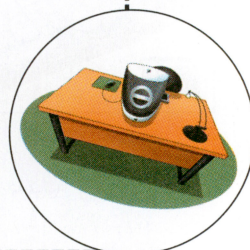
Internet Tips & Tricks

How to optimize
your online
experience

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Getting Comfy

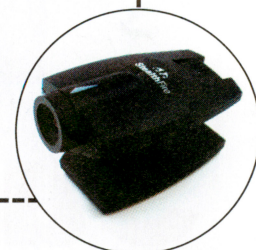
Picking out
a desk and
chair



Pg. 39

Handy Hardware

Cool accessories
under \$100



Pg. 38

Now Shipping

New Products for Your Macintosh



Computers

Power Macintosh G4
733MHz/128MB/
40GB/CD-RW: \$1,699
867MHz/256MB/
60GB/SuperDrive: \$2,499
Dual 800MHz/256MB/
80GB/SuperDrive: \$3,499
Apple, www.apple.com



iMac
500MHz/128MB/
20GB/CD-RW: \$999
600MHz/256MB/
40GB/CD-RW: \$1,299
700MHz/256MB/
60GB/CD-RW: \$1,499
Apple, www.apple.com

Storage Systems

Boa FireWire
External DVD-RW/
CD-RW (FireWire)
\$995, EZQuest
www.ezq.com

Peerless
Hard drive docking
system (USB/FireWire)
Base station with 10GB,
\$360; with 20GB, \$400
Additional modules:
10GB, \$160; 20GB, \$200
Iomega, www.iomega.com

Zip 100 USB-Powered
100MB external drive for
portable systems (USB)
\$100, Iomega
www.iomega.com

Software

The Sims House Party
Simulator Expansion Pack
Requires The Sims, 64MB,
Mac OS 8.1. Compatible
with Mac OS X
\$30, Aspyr
www.aspyr.com

American McGee's Alice
Action/Adventure Game
Requires 128MB, 400MHz,
ATI Rage 128 3D accelerator
Compatible with Mac OS X
\$50, Aspyr Media
www.aspyr.com

Corel Bryce 5.0
3D Landscape Generator
Requires 64MB, Mac OS 8.6
Compatible with Mac OS X
\$299, Corel
www.corel.com

Adobe PageMaker 7.0
Professional layout software
Requires 32MB, Mac OS 8.6
\$499, Adobe
www.adobe.com

Digital Cameras

Cyber-shot DSC-S85
4.1 megapixel, 3x optical
zoom, 16MB, MPEG
recording (USB)
\$800, Sony
www.sony.com

C-4040Z
4.1 megapixel, 3x optical
zoom, 16MB (USB)
\$1099, Olympus
www.olympus.com

Camedia D-370
1.3 megapixel, 2MB,
QuickTime recording (USB)
\$200, Olympus
www.olympus.com

Optio 330
3.34 megapixel, 3x optical
zoom, 16MB (USB)
\$800, Pentax
www.pentax.com

Digital Video

USB Instant Video
Video digitizer (USB)
\$70, ADS Technologies
www.adstech.com

MyTV2Go
Cable TV Tuner (USB)
\$100, Eskape Labs
www.eskapelabs.com

Xclaim TV
Cable TV Tuner (USB)
\$100, ATI
www.ati.com

Miscellaneous

4-Port USB Switch
Four computers can
share one USB device
\$40, Belkin
www.belkin.com

Mini USB Hub
4-Port, Bus/Self Powered
\$49, Keyspan
www.keyspan.com

MiniPro Ti
Small, portable one-button
optical mouse (USB)
\$35, Contour Design
www.contourdesign.com

PowerMate
Volume controller with pro-
grammable button (USB)
\$45, Griffin Technology
www.griffintechology.com

PowerWave
Audio adapter with multiple
jacks and built-in hub (USB)
\$45, Griffin Technology
www.griffintechology.com

Email Etiquette

The textual world of online communications carries its own set of rules. Violating accepted norms can often irritate or inconvenience people with whom you communicate. You can avoid many blunders by adopting the following suggestions:

- Avoid sending email to large groups of people using the carbon copy option. Carbon copy sends a copy of the email message to every person listed, and it includes each person's email address in the message. This is a significant issue for people who prefer to keep their email address private. So, when you're sending to a group of people, use the blind carbon copy option so that no one reading the message can see who it's been sent to, aside from themselves.
- Don't forward silly joke messages to every person in your address book. It's likely many people will find them unwelcome nuisances.
- Most modern email applications include a spell checker. Make good use of it. It's one thing to make silly spelling mistakes when you are sending email to a friend. It's a whole other issue when you are communicating with your boss or a prospective employer.
- Do not send people large files without their express permission. There's nothing more irritating than find a 10MB surprise in your mailbox. You must wait patiently while it downloads before you can access any other mail that might have arrived behind it.
- Try not to type exclusively with capital letters. It's generally accepted that words spelled out in capitals suggest strong emphasis, perhaps even screaming — i.e., "HOW DARE YOU SUGGEST THAT!" Exceptions are made for people with disabilities, of course.

Make Explorer Easier on the Eyes

Although Internet Explorer 5 is a finely crafted browser, it has a rather odd quirk: Microsoft has preprogrammed the software to enlarge online text. Unfortunately, many designers continue to create web sites around the 12-point font standard. Such sites viewed through Internet Explorer 5 display unreasonably large text that, in some cases, encroaches upon the site's interface graphics.

Thankfully, there's a simple fix. Launch Internet Explorer 5 and select Preferences from the Edit menu. A new window appears. Select Language and Fonts, the third item listed at the left. A different set of options is then displayed at the right. Midway down, you'll see pop-up menus titled Font Size and Resolution. To restore traditional proportions to IE5, simply select 12 from the Font Size menu and 72dpi from Resolution menu.

So what happens now if you come across a site with text so small it is illegible? Internet Explorer 5 intelligently allows you to scale the font size as required. To enlarge all fonts within a browser window, press command-(+). The more you press this key combination, the larger the fonts. To return the fonts to their original size, simply press command-(-). The feature enlarges and reduces fonts on a window-by-window basis, and does not alter your overall font preferences.

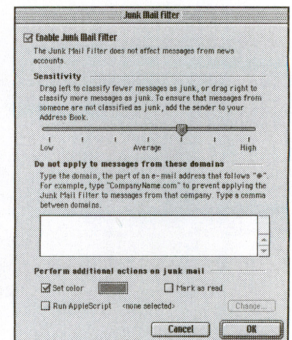
Internet Clippings

Launch Internet Explorer 5 and visit one of your favorite sites. Click on the @ adjacent to the site address in the address bar. Now, drag the address onto the desktop. You've now saved an Internet clipping file — double-click it at any time, and it will bring you directly to that web site.

Controlling Junk Mail

The scourge of emailers everywhere is surely junk mail — unsolicited messages that find their way to your inbox, touting everything from quick weight loss to instant riches. Outlook Express and Entourage include handy junk mail filters designed to identify suspect messages as they arrive. Select Junk Mail Filter from the Tools menu. Click the option at the top to "Enable Junk Mail Filter."

You can now adjust the filter's sensitivity — sliding the bar to the right lowers the filter's tolerance for suspicious messages. The next option allows you to specify address groups to be exempted from the filter. The last



option listed allows you to perform several actions with the junk email — specifying a color (red is always easy to spot), marking it as read or applying an AppleScript.

Identifying junk mail is only one step of the process. Once you have enabled the junk mail filter, you can make a mail rule to automatically delete suspect messages before they litter your inbox. Select Rules from the Tools menu. In the window that appears, select Mail (POP) from the New popup menu in the top left. At the top of the next window, name your new rule Junk Mail Delete (or something similar). Select "is junk mail" from the leftmost popup menu in the If box. Next, select Delete from the popup menu in the Then box. Click Okay to save the rule. Now you're all set! As junk mail arrives it is automatically identified and placed in Deleted Items.

Setting Toolbar Favorites

Internet Explorer 5 allows you to add your favorite sites to its toolbar. This can be very convenient, allowing you to access sites with one simple click. The first thing you'll want to do is get rid of Microsoft's collection of sites that currently litter the toolbar. Click on the Favorites tab at the left of the browser window. At the top you'll see a folder called Toolbar Favorites. Click once on the folder to open it, use the mouse to select all the sites within the folder, and then press Delete. An alert window pops up, asking you to confirm your intent to delete the items; click OK and then close the Favorites window.

There are several easy ways to add your own items to the toolbar. The easiest is to simply drag any underlined URL you see in your browser window onto the toolbar. Another option is to click on the History tab and simply drag the entry for any recently visited page onto the toolbar.

Occasionally, you'll discover that some pages aren't properly named. Some will be just an address, while others will have painfully long names. The shorter the site name, of course, the more items you can squeeze into the toolbar. Click on the Favorites tab and then click once on the Toolbars Favorites folder to pop it open. Hold down the control key and click on an item whose name you want to adjust. A contextual menu appears. Select Edit Name, and then enter an abbreviated title for the page. That's all there is to it!

Put your web browsing on hold

Microsoft's Internet Explorer 5 includes a handy feature called the Internet Scrapbook that allows you to store any web page you like for later viewing.

Launch Internet Explorer 5, locate a page you'd like to keep handy and



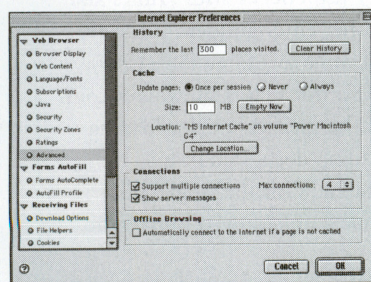
click the Scrapbook tab at the left. A drawer slides open, with buttons to Add, Delete and Organize Scrapbook files. Click Add and Internet Explorer 5 will automatically store it on your hard drive. You can access the page later on by opening the Scrapbook drawer and clicking the link. Since the web page has been stored on the hard drive, there's no need to connect to the Internet.

Guard Your Privacy

Internet Explorer collects and stores the addresses to the last 300 pages you have visited in its History panel. Thankfully, you can limit or even turn off the History feature. Launch Internet Explorer and select Preferences from the Edit menu. The preferences window appears, and you'll notice

a list of options to the left. Click on the item called Advanced. Several options will appear to the right. At the top, you'll see a box called History. You can reduce the number of remembered sites by entering a smaller number where it says "Remember the last ___ places visited." To turn off the feature completely, enter 0. You can also get rid of all currently stored page addresses by clicking the Clear History button at the right. Press OK to return to Internet Explorer.

What if you find the History feature convenient? Turning it off entirely may not be a wise solution for you. In this case, you can opt to open the History panel and remove the entries for any sensitive sites. Click on the History tab to expand the panel. Now, command-click an undesirable item. A contextual menu pops up. Simply select Delete from the menu, and the item will disappear without a trace.

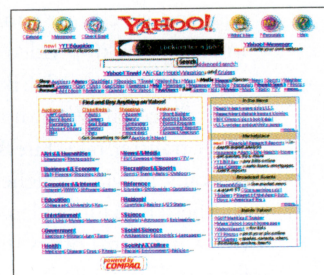


Refine Your Internet Searches

Internet search engines, such as Yahoo and Excite, search for web pages based on both the content and organization of the key words you enter.

If you search for a multi-word term, such as "Star Wars Collectibles," the search engine may return all pages that contain "Star" or "Wars" or

"Collectibles." However, if you enclose the phrase in quotes, i.e., "John Doe's Homepage," the search engine will return only the web pages that include that exact combination. This can significantly narrow your search. In the event that the search results are still too broad, you can try the site's advanced search options.



Handy Hardware

Must-have accessories under \$100

By Chris McVeigh

It used to be that external hardware was almost as expensive as the computer to which it was attached. **Not so anymore.** There are now a gamut of handy hardware accessories available for under \$100, ranging from multifunction mice to television tuners.

Consider the following fun and functional peripherals for your Macintosh.

Desktop Video Camera

Although real-time video conferencing remains somewhat out of reach, you can still have a ball with a desktop video camera. The small devices allows you to record short messages and send them to a friend via email, or set up a webcam so that people near and far can see you over the Internet. Desktop video cameras connect to either your USB or FireWire port. Since FireWire supports a much faster transfer rate, FireWire cameras typically provide a higher frame rate and better quality video. iREZ (www.irez.com) offers the KritterUSB for just \$70, while its new StealthFire (FireWire) retails for \$130. Prices for Orange Micro's iBot (FireWire) start at \$99 (www.orangemicro.com).

Cable Television Tuner

Several companies now produce cable television tuners for your Macintosh. The devices, which connect to your

USB port, allow you to channel surf while you work. You can record snippets of video from your favorite programs, or even connect a video camera and digitize your funniest home videos. Escape Labs (www.escapelabs.com) sells its MyTV2Go for \$99, which includes a 125-channel tuner. ATI (www.ati.com) offers its Xclaim TV for \$99 as well, but it offers full-screen television, closed captioning and four-channel preview in addition to its 125-channel tuner.

USB Hub

The best thing about USB is plug-and-play. You can connect and disconnect devices whenever you like, as often as you like. Of course, if you own a lot of devices, you're probably plugging and unplugging your equip-

ment all the time. You can solve this problem with a USB hub. Keyspan (www.keyspan.com) sells a four-port hub for \$39, Belkin (www.belkin.com) sells a seven-port hub for \$70, and Macally (www.macally.com) offers a small, three-port hub for \$40.

PowerMate

Looking for something unique to add to your system? Consider Griffin Technology's new PowerMate universal volume controller (\$45, www.griffin-technology.com). The device is a small silver dial that sits atop a glowing blue base. Aside from functioning as a master volume control, the unit has a programmable button you can use for muting audio and other one-click tasks. It also

functions as a soft power button, starting up the computer with just one tap. And did we mention that it glows blue?

iSub

The iMac's speakers might be good enough for alert sounds, but to enrich the experience with iTunes and other entertainment software, you'll want to add an iSub (\$59).

Harman/Kardon's clear subwoofer complements the speakers in slot-loading iMacs, adding deep, rich bass to the sound system. Visit the Apple Store (www.apple.com/store) to learn more.

Memory

The more memory you have, the more applications you can open, and the more able you are to run today's advanced games. There's never been a better time to buy RAM — at press time, the price of a 128MB module is floating between \$25-40. That's \$120 drop from last year at this time! Visit online retailers for the very latest pricing. 



Getting Comfortable

Choose the right desk and chair for your Macintosh

By Chris McVeigh

A computer remains an expensive item for many of us. Perhaps that is why people who **spend thousands of dollars on a new Macintosh** often do not give a second thought to their own comfort.

Some actually put the computer on an old table and use a folding chair or footstool as a seat, which can quickly lead to muscular discomfort. Purchasing a good desk and chair is essential to create a comfortable environment for you and your new Macintosh.

The Desk

It's best to look for a desk with a large flat surface — one that's deep enough to accommodate your iMac or Power Macintosh G4 and still provide ample room for your keyboard and mouse. Peripherals, such as a scanner or inkjet printer, should be placed within arm's reach of your Mac. The more surface area you have, the better.

You must keep the ergonomics of your computer in mind in order to avoid muscular discomfort. It's important that your display is at a comfortable eye level. You must also make sure that your upper arm and forearm are at

a right angle as you type, with your wrists and hands extended in a straight line. Your feet should rest flat on the floor with very little upwards pressure on your legs. There are two ways to achieve this. The first is to purchase a desk with a lowered keyboard platform and slightly raised desk surface. Avoid keyboard drawers — they tend to be unstable and are easily damaged. The second option is to raise the height of your display. Some companies offer desks with optional stands that raise the display approximately six inches.

Conveniently, you can store your keyboard under the stand when not in use.

It's best to avoid cheap all-in-one desks with a cute hutch and printer stand. Although they often look great in catalogs and store flyers, these

desks are often small and of poor construction. You'll also want to avoid a desk with drawers since it severely limits your lateral maneuverability. I'll often work at my Power Macintosh for a while and then scoot my chair to the left to read or write something on the desk — a task that is virtually impossible if you're bound by drawers on either side.

The Chair

Choosing a chair can be a difficult task. You might be inclined to purchase a soft, comfy chair with a high back. Unfortunately, such chairs are better suited for leisurely reading than working at a computer. Most people have a tendency to slump in their chairs, and this can lead to back strain. It's therefore important to choose a sturdy chair with solid lower back support. After all, you'll be sitting upright for hours at a time. Select a chair with an adjustable back that curves to support your spine. It's okay to choose a chair that tilts when you lean back-

wards, but you must make sure that you can adjust the tension. If the chair tilts backwards too easily, you may find yourself tensing your lower back in order to bring the chair forward again. This may result in additional discomfort and back strain.

It's also important to inspect the rollers of the chair you buy. Some inexpensive chairs are equipped with poor quality plastic rollers that collapse on themselves after a short time. Cast iron rollers are always the best choice, especially if you're going to be using the chair on a plush carpet. Rugged plastic rollers are a good alternative — just be sure to give the chair a test drive before you take it home. 

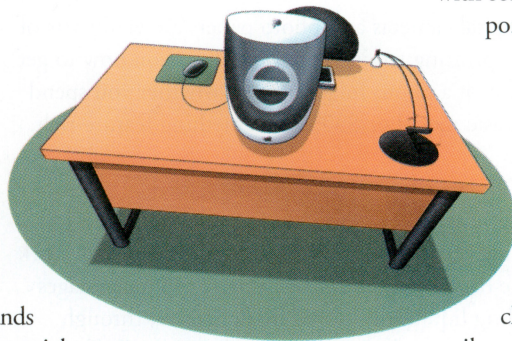


Photo Printer Primer

How to Print Photos that Pop

In the beginning there were noxious chemicals, eerie dark-rooms, and great expense if you wanted to develop your own photos. But now, with digital cameras, photo inkjet printers, and glossy papers designed specifically for home printing, creating your own photo prints is easy, fast, and getting cheaper all the time.

While digital cameras and photo papers are vital parts of your photo printing trinity, here we'll show you how to get the most out of a photo inkjet printer, whether you spend \$79 for a basic model or \$399 for something feature-rich.

The Same, Yet Different

Photo inkjets aren't like your workhorse inkjet in the corner, churning out reports and invoices, although they work in the same basic manner. Inkjet printers produce images by channeling liquid ink, stored in a reservoir, through

small nozzles on to the paper. Different colors are produced by spraying dots of four basic colors in alternating patterns, a process known as dithering. Your eye can't distinguish the tiny dots, so it's tricked into seeing different shades.

Photo inkjets differ from standard color inkjets in two important ways: their higher resolutions and better, more refined inks.

Instead of the 1,200 x 1,200 dots per inch resolution of standard color inkjets, most photo inkjets up the ante to 2,400 x 1,200 dpi, giving you lots more detail. And along with the expected four colors (cyan, magenta, yellow, black), some photo inkjets add a lighter cyan and magenta, additions which help even out gradations, create smoother midtones, and allow for finer detail — all vitally important when going for photo realism.

Getting Great Photos

So how can you get the most out of your photo inkjet, no



matter how much you spend? Easy, follow these three steps and you're almost guaranteed photo "pop":

1. Start with a high-resolution image
2. Know and use your printer driver software
3. Use the right ink and paper

Step 1: Resolution

You can't get a great photo if you don't start with a high-resolution image. Trying to print an 8" x 10" glossy from a 50K file is like putting a mastiff's collar on a Chihuahua: too much of one thing and not enough of the other to fill it.

If you try to print an 8" x 10" with that 50K file you'll end up seeing each individual pixel the image is made of instead of a blended whole; you've spread too little over too much space. For a smooth 8" x 10", start with a 1,280 x 1,024 image (about one megabyte) while for a standard 4" x 6" go no smaller than 640 x 512 pixels (around half a megabyte.) And of course, bigger is better. The larger your file the more detailed your photo's colors and shading will be, meaning greater photo-realism.

Step 2: Driver Software

Unless you buy a dedicated photo printer — such as Hewlett-Packard's PhotoSmart 1215 — you must learn to use the software that comes with your printer if you want great photos.

Driver software is how you talk to your printer. Every printer comes with its own (usually for Macintosh and PC), and here's where you can make a big difference in a photo's output. Use a printer's driver software to adjust a photo's brightness, select print quality (from ink-thrifty draft to color-saturated high quality), and, most importantly, tell your printer what kind of paper you're printing on.

Nothing affects a photo's quality like selecting one paper type in the software but actually printing on another. For example, ink doesn't penetrate glossy paper very deeply, so a printer uses less ink when told it's printing on glossy. But if you select glossy paper in the software

and then put an absorbent linen paper in the printer, too little ink will be put down

onto a porous surface and you'll be rewarded with a washed-out, faded print.

"Smart" printers like HP's \$399 PhotoSmart 1215 are time savers because they have sensors which automatically detect the kind of paper you're using, but if you buy something without that feature, you are the sensor. Always use your driver software to tell the printer what paper you're using. Then use that paper.

Step 3: Inks & Paper

There's a forest of printer papers out there, from glossies, brochures, and linen stock, to stickers and matte papers. But to get photo-realism from a photo inkjet, you just can't beat glossy paper. Nothing else makes your prints feel and look so much like conventional photos.

Yet twenty sheets of 8.5" x 11" glossy photo paper can go for \$10 to \$18. It

depends on what brand you buy and — of course — every printer manufacturer wants you to use their papers. That's because they've quality-tested their inks and papers together and can only guarantee your photos will meet longevity and quality standards if you use their suite of supplies.

But this doesn't mean you can't use another manufacturer's papers, it just means you're not guaranteed the same results if you do. Using different paper brands is the easiest way to experiment with your photo inkjet. Let your taste and finances be the guide to what you buy. Think of photo printing as a recipe; you can change the ingredients a little and still get something tasty, but if you change things too much you could be risking ruin. Which brings us to inks and ink refills.

There's no doubt third party inks can be cheaper than manufacturer's inks. Buy the good stuff and you'll spend roughly \$20 to \$40 per cartridge. Buy refills and you can cut the cost to less than half.

But, as with papers, each manufacturer sells photo inks meant specifically for their machines. Buy a no-name ink refill and you could be buying ink with a lower viscosity or surface tension than the original.

The result? A reduced surface tension may let ink penetrate your paper too deeply, giving a fuzzy, faded image, while low viscosity can allow ink to flow from the cartridge too quickly, giving you a wet, over-saturated print. A really bad third-party refill could even destroy your printer's ink cartridge. Don't experiment here; stick with the manufacturer's inks.

Once printed, how long should your photos last? Manufacturers like Hewlett-Packard, Canon, and Epson promise photos created with their inks on their papers should resist fading for 25 years or more under gentle environmental conditions. Keep photos away from ultraviolet light, excess humidity and temperature



Hewlett-Packard's PhotoSmart 1215, a high-end, feature-rich example of today's photo inkjet printers.

extremes, such as those that occur in an attic or basement. If you live in a high-humidity area, consider using a dehumidifier. If longevity is what you're after, always use a manufacturer's recommended paper with its inks. But be aware that so far nothing beats conventional photos for sheer lifespan.

Photo Finish

If you're eager to create your own prints at home, take your time when looking for that perfect printer. Test each contender before you buy. Bring your own image on a CD or floppy disk, and get a glossy sample from each machine. I favor using an image that includes skin-tones and solid colors. Solid areas show a printer's faults by making ink irregularities (like gaps or lines) easy to spot, while skintones show if that printer's colors appear "true" to your eye.

After you've bought one, remember, if you want dewy tomato reds, complex browns, and crisp sky blues, it comes down to this: start with a big image, use glossy photo paper, and make the most of your printer's driver software. It'll be a great photo finish, every time. **MH**

Tell Us What You Think!

Please take a moment to let us know what's working and what can still improve. Our survey will only take 2 minutes and we'll automatically enter you into a drawing for some great MacHome items. Go to www.machome.com/feedback

Math Blaster Cross Terrain Challenge

Math Blaster Cross Terrain Challenge is all about giving kids what Knowledge Adventure thinks they crave, so playing this is like watching MTV, right down to the snide host and “pure energy” soundtrack. Beneath the glitz, though, lies a solid educational title with a unique approach to teaching critical decision making.

Five missions, each with three levels, present an array of problems that will have you doing everything from building pipe networks to pulling radical hoverboard tricks. Each puzzle is explained by a narrator; while he talks, a demo is shown so you not only hear the rules, you see them in action — a nice touch. The Bounce level is a great example of the creativity of this game — hop across a grid

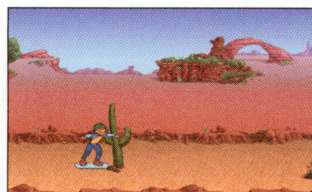
with chess-like maneuvers, trying to reach a hoverboard before the enemy robot does.

There are two areas where Cross

Terrain Challenge falls short. One involves the hoverboard controls. To pull off the required slick tricks means striking awkward keyboard combos, and I spent more time falling on my helmeted head than catching air. The other problem is that the puzzles are too easy for the recommended age group. Kids as young as seven could enjoy this title.

The “Math Blaster” is a misnomer, as Cross Terrain Challenge isn’t about numbers and equations as much as it’s about logic and quicksilver thinking. But glitz plus brains adds up to a game that’s worth your time.

— Sandy Brundage



rating ★★★★★

Ages 9-12
Knowledge Adventure, \$20
www.knowledgeadventure.com
800-542-4240

Alphabet

Alphabet is an electronic workbook. The “workbook” part is a booklet containing each exercise presented on the CD-ROM, letting a kid carry the lessons along on a road trip or into the backyard. The CD is worth spending a few hours inside at the computer, though.

The world of Alphabet is one of encouragement and “tell and show” instruction. Directions are accompanied by animations that show exactly what to do. Kids will practice alphabetical order, letter-sound correspondences and word recognition. Right answers get singing yellow stars, while wrong answers get a sad red checkmark. Kids can go back and try again until they see nothing but stars.

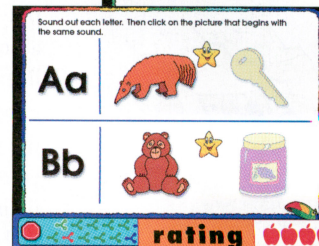
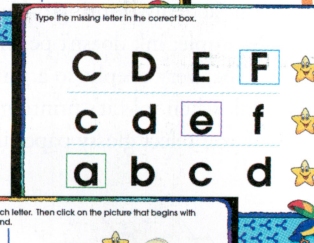
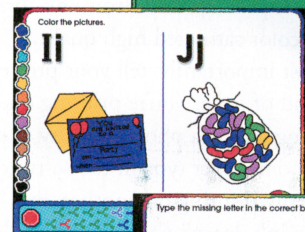
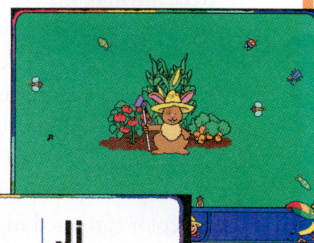
It takes advantage of the Mac’s multimedia capabilities; the name of any item pictured is said whenever the cursor passes

over it, even on the coloring games. Each pot of paint has its color said out loud when the brush dips in.

This title was crafted with its young audience in mind. Controls are limited to single clicks, so there’s no complicated double-clicking or dragging and dropping. Short attention spans are accounted for. Games that build hand-eye coordination, like squashing bugs in a garden or dodging a helicopter around clouds on the way to a pirate island, pop up after every literary activity.

Alphabet is a charming tutor for people just starting out on the long road to literacy. It’s fun, it’s smart, and it’ll get your kids excited about words. What a bargain.

— Sandy Brundage



rating ★★★★★

Ages 4-5
School Zone, \$15
www.schoolzone.com
800-253-0564

Lexia Early Reading

Kids can get through Lexia Early Reading without any knowledge of the alphabet. Surprising? Not once you understand the program's premise: to learn to read, children must develop "phonological awareness." It is these auditory skills, such as recognizing the initial and final sounds of a word, that Lexia Early Reading drills.

All the drills follow a similar format. To teach rhyme awareness, for example, the program shows three drawings (such as cap, map, and rake) and asks users to click on the two that rhyme. In all four drills, the program reads the words aloud, so that a

limited vocabulary doesn't keep kids from getting the right answer.

Lexie the Lion, the stiff but amiable host, gives clear instructions throughout. Each drill builds up to increasingly difficult exercises, and an optional

"automatic branching" feature adjusts the difficulty according to each student's performance.

The program's major weakness is the heavy chassis around the games; Teacher Options aren't optional at all, as you must create classes with students (or at least a one-student class) before kids can play the games. For home use, this is overkill.

So should you buy Early Reading to give junior a head start on reading? Not necessarily: many children develop phonological awareness naturally. Unless you believe your 4- to 6-year-old is having auditory awareness problems, you may be better off heeding the simple advice of picture-book author Rosemary Wells: "Read to your bunny, and your bunny will read to you."

— Marina Krakovsky

Math Advantage 2002

What do you get when you squeeze years of math into one package? With Encore's Math Advantage, a mixed bag. The Pre-Algebra, Algebra, Geometry, Trigonometry, Pre-Calculus, Calculus, and Statistics discs have a clean, logical interface. But the software opts for dry definitions and formulas rather than motivating students with real-world applications.

The exercises and tests are all multiple-choice. Students can guess at answers, never having to show their work. The diagrams look like chalk-board scribbles. And in simulations, students plug in a number, then the software shows the solution, but without illustration. It feels like mathbooks on tape — comprehensive, but dull.

AP Calculus and AP Statistics make smarter use of graphics to show concepts like binomial distributions. However, navigation is confusing and they don't track your progress. But the most serious shortcoming of the AP section is the omission of a workbook repeatedly referred to by the software. Without the workbook, the curriculum on these discs is too shallow to prepare students for an Advanced Placement math exam.

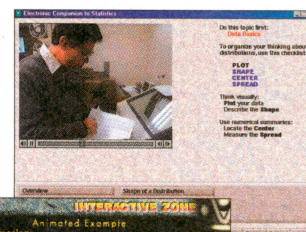
A nifty feature is an application that generates fill-in-the-blank problems based on the first seven discs. This problem generator includes a graphing calculator, but this calculator should also have been available elsewhere since the Math Advantage interface prevents users from accessing the Mac's desktop calculator.

If your child's a budding Leibniz and self-motivated, Math Advantage could be just the thing. But for most students, there's little here beyond what they can get in school.

— Marina Krakovsky



Ages 4-6
Lexia Learning Systems, \$99
www.lexialearning.com
800-435-3942



rating

Ages 11 and Up
Encore Software, \$40
www.encoresoftware.com
310-719-2890

Games of the Past!

Emulators Give Life to Your Favorite Classic Games

“Emulators” are programs that allow your Mac to pretend it’s something it’s not. This means your Mac can pretend to be a Nintendo Entertainment System, an Apple II, or even an upright arcade game.

In order to become an emulation junky, however, you’ll need to learn a few new terms and tools. Let’s start off with the venerable king of emulation, MAME. No, it’s not someone’s wacky aunt from New York, it’s the Multi Arcade Machine Emulator, and it’s your ticket into the world of Donkey Kong, Pac-Man, and Street Fighter II. Go ahead and download the newest version from the great resource www.emulation.net.

Arcade game companies like Atari didn’t design every game from the ground up. They liked to use the same underlying hardware over and over, while the software on top changed with each game. Thus, many arcade games share common hardware. MAME simply pretends to be all the different types of hardware arcade companies used.

By Alex Handy

In order to have some fun, however, we’ve got to

download some software to run on the emulator. In the world of emulation, games are called ROMs, because they were typically stored on read-only media (think Atari 2600 cartridges).

Most companies aren’t too thrilled with the idea of people downloading their games for free. Further clouding the issue is the fact that a lot of arcade games from the 80s were written by companies that are now either out of business or part of larger gaming conglomerates. The general rule of thumb is “If you already own a copy of the game, you can download the ROM.”

So just where in the heck do we find these ROMs? For

MAME, Apple II, Atari 2600, and other ROMs, we need to go to www.classicgaming.com/vault. There’s an excellent collection of old titles here, and most are reviewed, rated, and categorized.

But what if you want to emulate that old Apple II you have in the closet? There are three excellent emulators out there for the Apple II: Bernie II The Rescue is the fastest IIgs emulator out there, Stop The Madness is a terrific

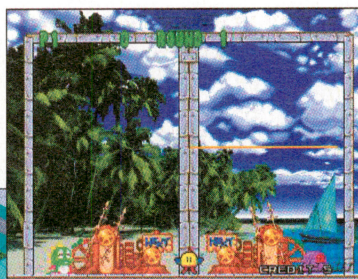
Apple II emulator for 68k Macs, and Katakig allows you to emulate a II, II+, and IIe with ease. Of course, what good is an Apple II without the appropriate software? Got a stack of old 5.25 inch disks? How about IIgs

3.5 inch floppies? Emulation.net has links to a number of utilities that allow your Mac to read and use these disks.

If you’ve got younger blood coursing through your veins, you might be better satisfied with emulating the Sega Genesis or Super Nintendo.

Emulators for these gaming consoles can also be found at www.emulation.net.

Keep in mind that all of these emulators will run very well on a 604e based Mac. In fact, MAME will run on any PowerPC at all, and most Apple II emulators run on 68k Macs with aplomb. This means that with just a few hours of work, you could create your own virtual arcade out of that old PowerMac 8100 in the garage! **MH**

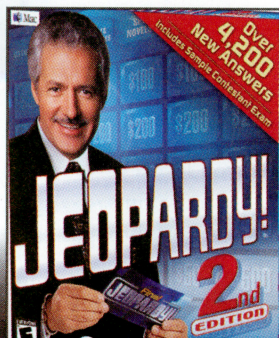




Mac

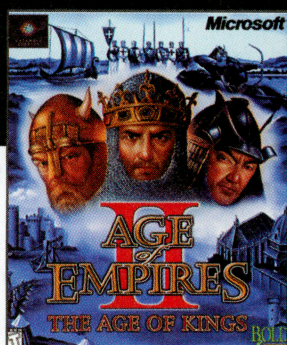


Shipping in November

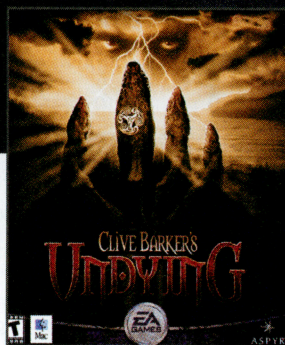


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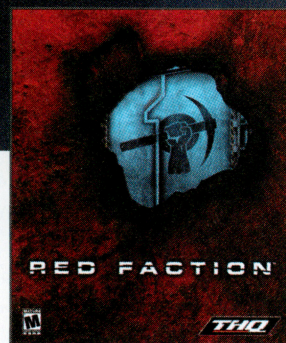
This Fall's Hottest Games Built for Mac OS X



Shipping in October

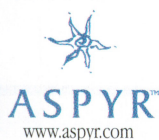


Shipping in October



Shipping in October

Check out www.apple.com/games



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The Sims: House Party

If you love The Sims as much as you love a good bash, House Party may be for you. This new Sims expansion pack emphasizes group interaction through the hosting of extravagant and wild parties, thereby giving the Sims a new way to make friends and influence people. If you already have a copy of The Sims, then this expansion will bring an enjoyable new dimension to the game you already know.

House Party uses the same gameplay as the original Sims; players find a home for their fake people and strive to run it efficiently and prosperously. The thrust of House Party, however, is to bolster your social life by inviting your Sims' friends to a great party. New items and actions make this possible. For

instance, Sims can hire the services of a caterer, install a mini-bar or even provide a gigantic "bubble blower" (which looks suspiciously

like a huge hookah).

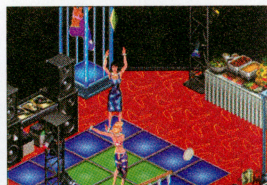
Sims can ride a mechanical bull and have a cow-boy-style hootenanny,

a Polynesian Luau with Tiki torches, or put together a modern rave with throbbing lights and go-go dancers. You

may even receive an unexpected visit from an annoying mime or a party-crashing boor.

If you had complaints about the original Sims game, House Party isn't likely to change your mind. Rather, it uses the familiar formula of the original game, but augments it with a broader range of options for social interaction. Full of the lighthearted, clever humor The Sims, House Party is well worth the cost for someone looking to add a fun new dimension to a classic game.

— Corey Tamás



rating ★★★★★

Aspyr Media
\$20
www.aspyr.com
888-212-7797
Requires: The Sims

American McGee's Alice

Alice chronicles your title character's spiraling descent through Wonderland. The best part of the game is its aesthetic sense; that alone may be worth the price of admission. While none of the game is just plain bad, several elements of the gameplay keep it from being enthralling. Alice is pretty to look at, and usually entertaining, but it won't keep you playing for hours.

An action game from the third-person perspective, Alice presents lush worlds to explore.

Along the way, you'll encounter waves of enemies to defeat with deadly cards, an explosive jack-in-the-

box, and other Wonderland toys. And while cutting down one baddy after another grows predictable, a few surprising elements

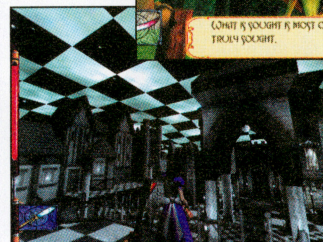
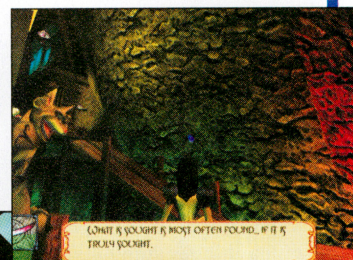
restore the excitement and creativity to the game. At one point, Alice turns into a chess piece and navigates hazards while moving according to

the rules of that piece. Other positive elements include the mood-setting music and sound, and native OS X support out of the box.

The mixed components of Alice are generally elements that repeat, leeching the creativity out from the game. Many levels are drawn-out; drifting down a river on a lilly-pad, something that's even duplicated in many games, is interesting at first, but ends up being a boring way to travel. Jumping puzzles, where you'll have to cling to certain vines and land on precarious ledges, clutter the game. Several bugs cropped up when loading levels, too; the only way out was a restart.

While Alice is flawed, with repetitive level design and a few bugs, its clever visuals and aesthetics give enough reason to consider the game.

— Zack Stern



rating ★★★★★

Aspyr Media
\$50
www.aspyr.com
888-212-7797

Green Berets

Green Berets is a real time strategy game in which you control a squad of six grunts in the bush during Vietnam. Using the mouse to issue orders and the keyboard to move the overhead camera, you'll lead your troops through 10 single player levels of hunting Charlie.

Since the game is built on the Myth II engine, the graphics and gameplay are slightly behind those of current real time strategy games. The single player game usually centers around moving down wave after wave of Vietcong troops as they stream over hills and out of the bushes. The missions tend to be fairly linear, and with the exception of the helicopters that show up to help and resupply your G.I.s, there's very little here that wasn't in the original Myth II.

Of course, all of your troops have machine guns. That's definitely different. But the guns make for an odd addition to the Myth II world. It will take you a while to figure out just what your troops can see, and what they can shoot (two

entirely different things).

The rest of your arsenal is what you'd

expect: grenades, high explosives, and medical kits. When compared to other Myth II mods, Green Berets stands out. When compared to other real time strategy games, however, it's not quite as impressive. Still, online play is fabulous, and since the packaging does come with a full version of Myth II, there is a lot of fun to be had out of this box. If you don't already own Myth II, and you enjoy good strategy games, this is an excellent choice.

— Alex Handy

Sheep

In Sheep, your goal is to maneuver your flock through quirky hazards within a limited amount of time. Get enough of your sheep to the goal safely to advance to the next level. If this sounds odd, it probably is. But it's also fun, and lets you sit down for a few quick levels at a time. While the interface is flawed, Sheep is still an amusing diversion.

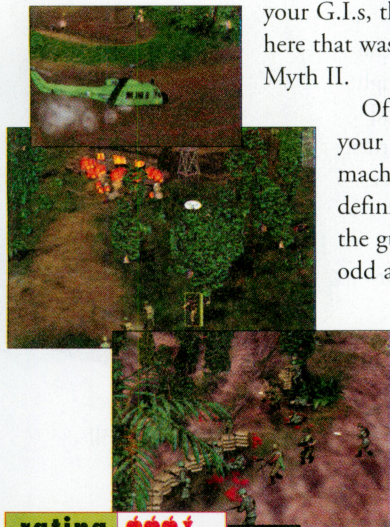
You control one of several shepherd herds who chase the sheep through the levels. It takes a little practice to get the flock running in the right direction, but by cutting off angles and shouting, they'll often go where you want.

Sheep stays light with ridiculous enemies, hazards, and animations. From an angled, overhead view, your flock can be seen executing flips off springboards over a river, slowly sinking into that river if they don't make it across, and otherwise trotting headlong in the direction you push. Sheep's looks keep it amusing.

A flawed interface is Sheep's main problem. You can only save the game on a certain screen at the end of each level; forget to push save at the special screen, even if you haven't started the next board, and your progress won't be recorded. And you can't change the controls or other settings without exiting the current game.

But Sheep gives a quick way to get into the game, appeals to gamers of different ages, and has a light tone that makes it entertaining. It may not keep you occupied for hours, but Sheep does create a fun distraction.

— Zack Stern



rating ★★★★

Take-Two Interactive Studios
\$30
www.green-berets.com



rating ★★★★

Graphic Simulations
Corporation
\$35
www.graphsim.com
972-386-7575

The iBook Primer

How to Care for Your New Laptop

Rugged and yet beautiful, today's iBooks roll all the functionality of the iMac into a convenient portable package. Miniaturized components require special consideration, however.

The Display

A liquid crystal display varies in contrast from top to bottom, depending upon the angle that it is viewed. From approximately one foot away, you will notice that the top of the screen appears darker and more saturated while the bottom appears lighter and somewhat washed out. This is normal, but can be distracting. Solid colors and patterns only call attention to the contrast differences. Replace your pattern with a desktop image that varies from top to bottom.

Your display is also sensitive to pressure. Avoid touching the screen with your fingers (and especially pointed objects such as pencils and pens). Fingerprints and smudges can be easily cleaned off, but dents and punctures will permanently mar your display.

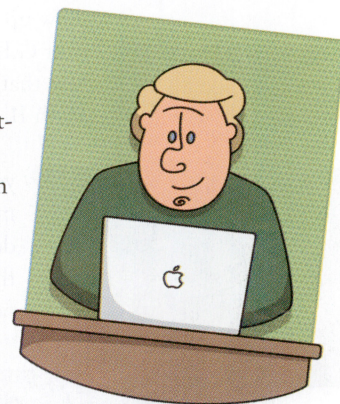
By Chris McVeigh

You may notice that several of your display's pixels are continuously lit. Unfortunately, production of liquid crystal displays remains an imperfect process. Modern iBook displays contain over 2.35 million transistors that control the pixels, and occasionally a small number of them malfunction, getting either stuck on or off. For example, you may notice two green pixels that are constantly lit. Does this mean your iBook display is defective? Not necessarily. Apple allows several pixel failures per display, depending upon their number, location, and proximity to each other. Visit an Apple authorized service provider for a professional opinion if you have questions.

Extending Battery Power

Sooner or later, you'll want to eke extra juice from your battery. There are several tried and true methods to do this. The first step is to open the Energy Saver control panel and pull the slider all the way over to the left for Better Conservation. This puts the computer to sleep much faster when it's idle. The second step is to minimize

your use of energy; set the display to minimum brightness, use the modem and USB devices sparingly, turn off the volume, and eject any CD or DVD you might have inserted. It goes without saying that you should try to avoid activities that call upon all components of your iBook when away from an outlet. Watching a DVD movie, burning a CD, or playing a game will strain your battery.



Care and Cleaning

Although your iBook is sturdy and built for traveling, it's not impervious to the elements. Throwing an iBook in a bookbag or briefcase can result in scars and scuffs in its rubbery finish and, in rare cases, may lead to internal damage from bumping and jarring. Invest in a padded carry case to protect your new friend from damage.

Since you'll be toting your iBook with you wherever you go, it will tend to get dirty quicker than a desktop Mac. Its bright white surface also tends to highlight dirty fingerprints and other smudges. Find a soft cloth that doesn't leave lint, and use it with a mild household glass cleaner to help get rid of stains and smudges. Never spray the cleaner onto the iBook — it's got far too many crevices for the cleanser to leak into and wreak havoc. Always spray the cleanser on the cloth and then wipe the rubbery surface. To clean the keyboard, buy a can of compressed air and a soft bristled toothbrush. Use the toothbrush to loosen the dirt and the compressed air to blow it away. **MH**

Electron Storm

The Inner Workings of a Color Monitor

Although largely overshadowed by new flat panel displays, the glass tube-based color monitor is a ubiquitous part of modern life. From emergencies rooms to corner stores, displays are so common that we rarely pause to marvel at their genius.

Inside the Tube

The basis of every color monitor is a specialized vacuum tube known as a cathode ray tube (CRT). The tube has a large, flat surface at one end that gracefully tapers to small rounded point. The inside of the flat surface is covered by a phosphorescent material that glows when bombarded by electrons. The monitor displays a gamut of colors by combining the three primary colors of light. This is achieved via three electron guns — one red, one green, one blue — that reside at the back of the monitor's housing. Electrons from the three separate guns are accelerated as they pass through a series of anodes. The color beams strike the phosphorescent surface to form a dot triad.

By Chris McVeigh

The intensity of the electron beams determines the bright-

ness of each primary color, and therefore the overall color of each pixel. If all three electron guns fire at maximum intensity, the resulting dot triad will appear as a single white dot. Once struck by the electrons, the phosphor continues to glow briefly. For the image to be maintained, however, the phosphors must be reactivated by a barrage of electron beams.

Of course, electrons must strike every point of the display's inner surface to create the entire screen image. The direction of the electron beams is controlled by a series of deflecting coils that produce a low frequency electro-magnetic field. The electron beams scan horizontally, passing from left to right and then dropping down to next line, in the same manner you are reading a single column of this article. Once the scan hits the bottom right corner, it jumps back to the top left and begins again.

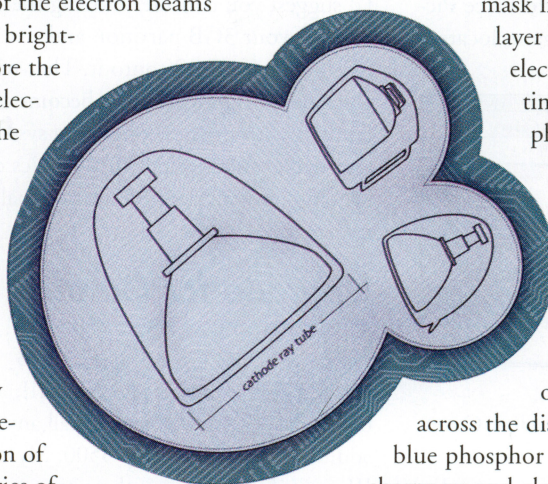
The scan happens so fast, however, it is almost undetectable by the human eye. The scan rate is measured in hertz — figures you may have noticed in the Control Strip's resolution module (like 1,024 x 768, 90Hz). A faster scan rate produces a more consistent and even image. Scan rates lower than 70Hz tend to produce an image that subtly flickers, which can lead to eye fatigue and headache.

Improving Focus

Modern displays incorporate two different technologies to create a sharper, clearer image. A shadow mask display uses a thin plate of metal with thousands of holes punched in it to

create a sharper, more consistent image. The mask lies behind the phosphorescent layer of the display, requiring the electron beam to pass through its tiny holes in order to strike the phosphorescent layer. This helps control the individual intensity of each color at each dot triad and shadows the display, ensuring truer, deeper blacks.

Other displays use an aperture grill. A special grill of metal wires runs vertically across the display, separating red, green and blue phosphor columns. This enhances the sharpness and clarity of the on-screen image, and blocks less of the electron beam than a shadow mask to create a brighter overall image. The technology requires horizontal stabilizing wires that help stabilize the grill and guard it against shocks. Although they are thinner than a human hair, the wires are readily visible onscreen and can be jarring for new users. **MH**



Eject a CD, Fix Generic Icons, and Manage Modern Games

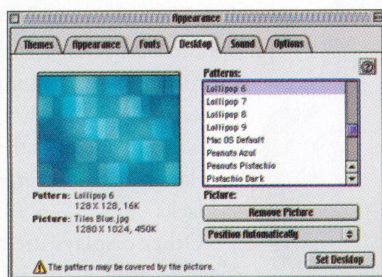
Desktop Picture Input

Q I always enjoyed the shareware application Decor for decorating my desktop. I've installed version 3.0.4 but can't get it to work. Is there some way to get it to work, or alternatively, can I import pictures into the Appearance control panel?

— *Judy Hocking*

A The Appearance control panel included with Mac OS 9 can easily accommodate additional desktop pictures. Open the Appearance control panel and click on the Desktop tab at the top. Click Remove Picture in the lower right to get rid of your current desktop image. That button will then change to Place Picture. Click the button again, locate

By Chris McVeigh



your desktop image, and click Open. Now, click Set Desktop, and your background image will be changed immediately.

To speed up the process, you can drag and drop your preferred desktop image onto the desktop preview window and click Set Desktop. You can even randomize your desktop image

by dragging and dropping a folder of images onto the desktop preview window and clicking Set Desktop. Each time you start up, a different image will be displayed.

Re-partition

Q I have a Power Macintosh G4 with a 20GB hard drive. It has two partitions: 3GB and 17GB. Can I partition it again so that I can install Mac OS X on its own partition?

— *George Krehner*

A Although it's possible to create several partitions of your hard drive, the only way it can be done is by backing up all your data and completely reformatting the drive. Instead, I'd suggest you consider moving the data off your 3GB partition and installing Mac OS X onto it. That will give you an opportunity to become familiar with the new operating system while you consider the logistics of backing up your data for an eventual reformat.

Upgrade for Games

Q I have a Power Mac 5500/225 with Mac OS 8.1 and 32 MB RAM. I really want to play Myst III, but as far as I know, I can't install any additional memory in my 5500. Myst III requires 64MB, so is there anyway I can get around the memory issue, or do I just need a new computer?

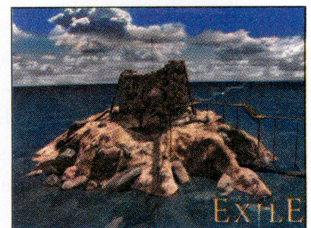
— *Jo Crosby*

A Your Power Macintosh 5500 can be upgraded to 128MB of

RAM. Unfortunately, you've got bigger issues to worry about. Your computer uses an older PowerPC 603e processor running at 225MHz. Myst III requires a newer PowerPC G3 processor running at 233MHz or faster. While a speed difference of 8MHz may seem inconsequential, the PowerPC G3 is stronger than the PowerPC 603e in your system. Even if you add memory to your computer, you will

not be able to play Myst III.

It's probably time to buy a new system. Given that you've been satisfied with the performance of your Power Macintosh 5500, you probably don't need a lot of horsepower. I'd suggest you consider the low-end iMac with an optional iSub to bring out the bass tones of Myst III's haunting soundtrack.

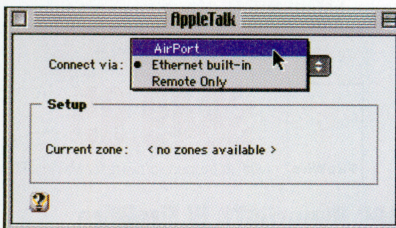


Restore Icons

Q I use AppleWorks for all my letters, forms, and notes. I could always recognize an AppleWorks document by its icon (the square box with a pen across it). Somehow, I've lost that fancy icon. I seem to have a generic icon now that looks like a sheet of paper with the top right corner flipped down. Is there any way to get the old AppleWorks icon back?

— *George Michiels*

A It sounds as though you may have minor hard drive problems. The most common solution to this problem is to rebuild the desktop. Reboot your Macintosh, and immediately hold down Option and Command on your keyboard. As soon as the desktop appears, you'll be asked if you want to rebuild the desktop of your hard drive. Click OK. The computer will now examine the hard drive, rebuilding the file that



matches icons to applications and documents. If all goes well, your AppleWorks documents will once again sport an AppleWorks icon.

In the event the problem persists, you should try running Apple's Disk First Aid, found on the CDs included with your computer. Launch the application and click the Repair button at the left. Disk First Aid will now take a closer look at your hard drive to see if anything's amiss and repair what it can. If it finds problems that cannot be repaired, consult a local Apple Authorized Service Provider.

iMac CD Eject

Q I've got an iMac (400MHz, Graphite). I recently tried to install an application, and the CD started spinning up and then it slowed down. It now sounds like it's rubbing against something. The Eject command in the special menu is grayed out, and when I try to drag it off the desktop, the computer reports that the CD "cannot be ejected because an application is in use." There's no hole for a paper clip mechanical ejection. I tried rebooting but nothing works. What can I do? I'm at a loss.

— Mike Houda

A Apple has provided two ways to deal with disagreeable CDs. The first option is to simply restart your iMac and hold down the mouse but-

ton. This action tells the computer to automatically eject all media at start-up. In most cases, this will eject stubborn discs. The noises you are hearing from the drive may be a symptom of something more sinister, however. Still, there's no need to run to your local Apple dealer in tears. Examine the mouth of the drive closely and you'll see a small hole in the fabric at the far right. Stick an unfolded paperclip in this hole, and you'll be able to manually eject the disc.

AppleTalk Over AirPort

Q I have an iMac and an iBook, both with Mac OS 9.1 and AirPort cards. I used to be able to network the two computers via AirPort, but I can't anymore. Neither computer shows up in the Chooser. I don't know what changed. The computers are still able to access the Internet though my AirPort Base Station. Can you help?

— Steve Calmy

A Your networking preferences may have been reset if you've recently zapped your PRAM or altered them. Open the AppleTalk control panel. I'd wager dollars to donuts that on both systems, the Connect Via popup menu is set to Ethernet built-in. Change the selection to AirPort, close the window, and save your changes. Now go to the Chooser and click on the AppleTalk icon. Assuming that the other computer has its File Sharing turned on, it should then appear at the right, letting you access the other computer. **MH**

have questions?

Got a Mac problem that's driving you nuts? Let us take a crack at it. We'll answer questions of general interest to all readers. All mail is assumed intended for publication, and we reserve the right to edit questions for brevity and clarity. When sending your questions, include your full name and phone number. Send your questions to:

questions@machome.com

MacHome Quiz

Answers from page 21

ANSWERS:

1. Click once on the file and press Command-Delete.
2. Copy an image to the clipboard. Click once on the file of your choice, and press Command-I to access the Get Info window. Click on the icon in the top left, and press Command-V. This pastes the image in the clipboard onto the file. Now close the window.
3. Hold down the Command key while you double-click.
4. A hidden item in an application is called an Easter Egg.
5. Drag a full Internet address to the desktop from Internet Explorer (or any text editor). All you need to do is double-click the clipping and you are immediately taken to that site.
6. Press the power key once, then select Shut-Down.
7. Open the Appearance Control Panel, click the fonts tab, and increase the size of the Views Font.
8. Click once on the disk and press Command-Y.
9. 127 devices can be connected to a single port.



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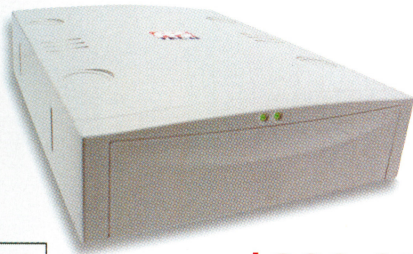
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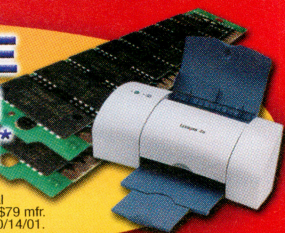
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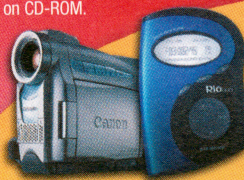
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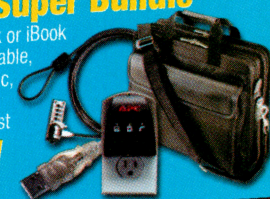


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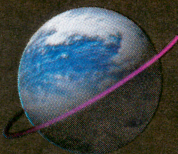
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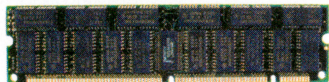
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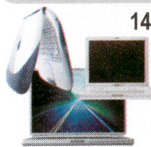
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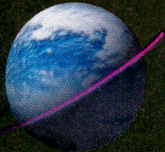
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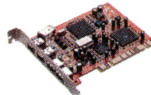
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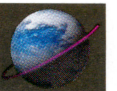
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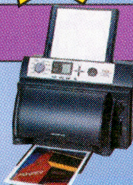


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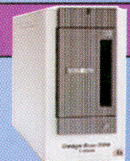
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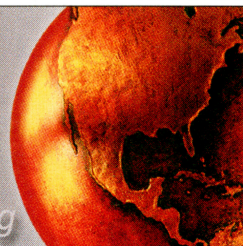
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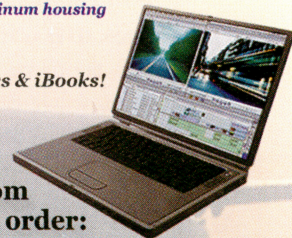
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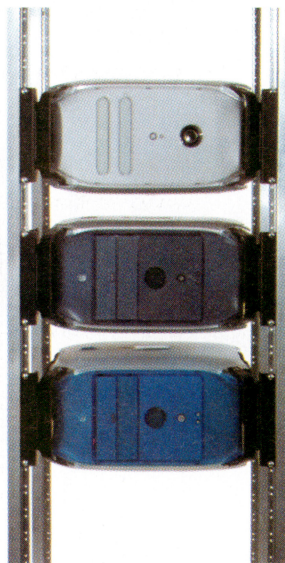
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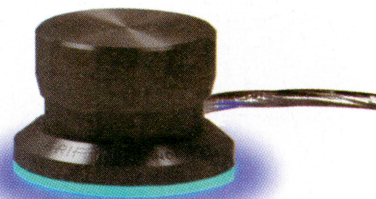
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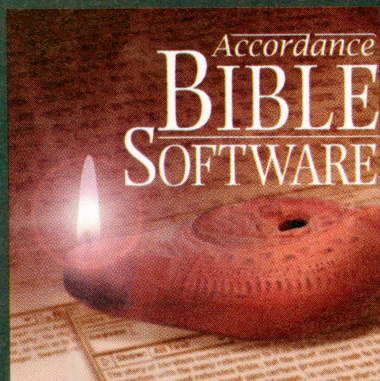
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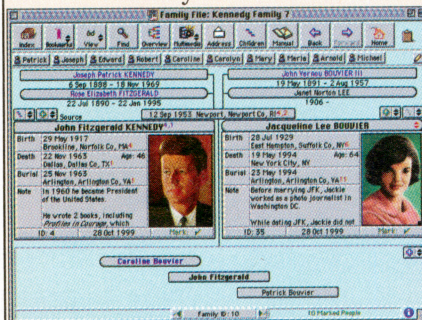
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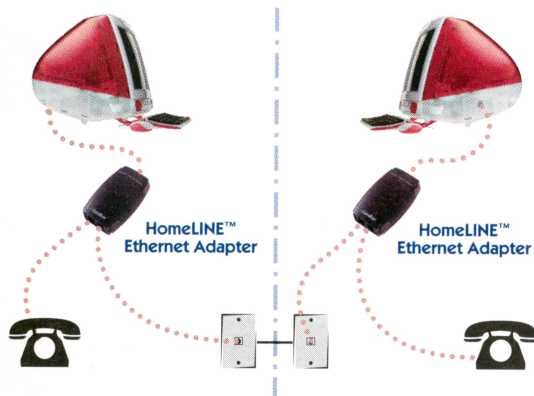
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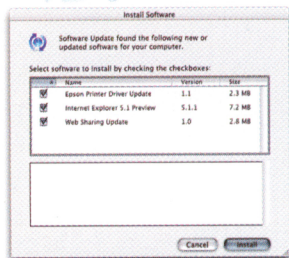
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Web Clippings, Hidden Docks, and Software Update

Using Software Update

The quickest and most efficient way to download the latest Mac OS X updates is through the Software Update system preference. The panel can poll Apple's servers at regular intervals to check for new software updates. Select System Preferences from the Apple Menu, and click the Software Update icon. Now click the radio button to Update Software Automatically, and select Daily, Weekly, or Monthly from the interval popup menu. (Weekly is probably the best choice.) Software Update will then search for new updates at that interval, cross-referencing the newest available updates with the software currently installed on your Macintosh.



By Chris McVeigh

You can also initiate a search if you've just heard about a new update, too. Simply visit the Software Update panel, and click the Update Now button. Software Update will immediately contact Apple and list available updates in a new window. Check off the updates you want, and then click the Install button in the lower left. Software Update will then download and install the revisions while you continue your work, prompting you when the computer must be restarted.

Clippings with Mac OS X

Internet Clippings are alive and well in Mac OS X. Open



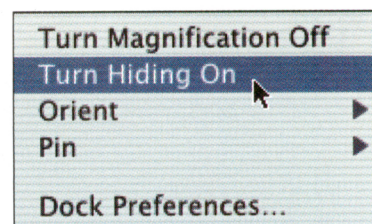
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Internet Explorer, and go to a web page of your choice. Now, click on the @ icon adjacent to the site address in the top of the window, and drag it to the desktop. (You can even drag the address directly from Internet Explorer into the Dock, for the ultimate in convenience.) This creates an Internet Clipping that you can double-click at any time to automatically revisit that web page. You can also drag and drop email links from Internet Explorer. Double-click

an email clipping, and Mac OS X's Mail application automatically launches, creating a new message with that address.

Dock Be Gone!

Do you hate the way the Dock overlaps the bottom of your application windows? You can opt to hide it if it gets in your way. Click the Dock to the left or right of the divider and hold the mouse button until a menu pops up. Select Turn Hiding On, and the Dock will disappear. You can interact with the Dock at any time simply by dragging the mouse to the bottom of the display. The Dock will slide up, allowing you to make a selection.



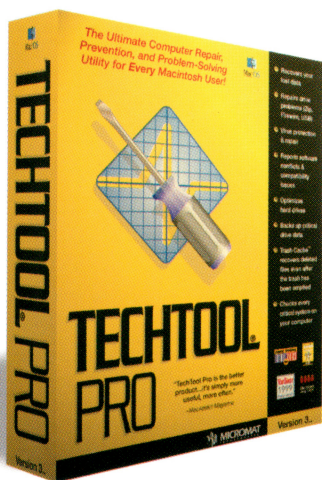
Once you drag the mouse off the Dock, however, it will slide away again. You can turn hiding off the same way you turned hiding on — click on the Dock left or right of the divider, hold the mouse button until a menu pops up, and then select Turn Hiding Off.

Quick Tips

- You can navigate through pane view Finder windows with the arrow keys. Left takes you to the previous pane, right moves forward, and up and down allow you to scroll through the list of files in a single pane.
- Double-clicking on the title bar of a window sends the window into the dock.
- You can add any file or folder to the Finder Window's toolbar simply by dragging it onto the toolbar. The other icons will move aside to let you place the new icon where you like.
- Running out of RAM? Trying quitting Classic, if you're not using it at the moment. Select System Preferences from the Apple menu, and click on the Classic Icon. Assuming Classic is active, you can click the Stop button in the lower left to abandon the environment. You will be prompted to save any open documents. **MH**

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